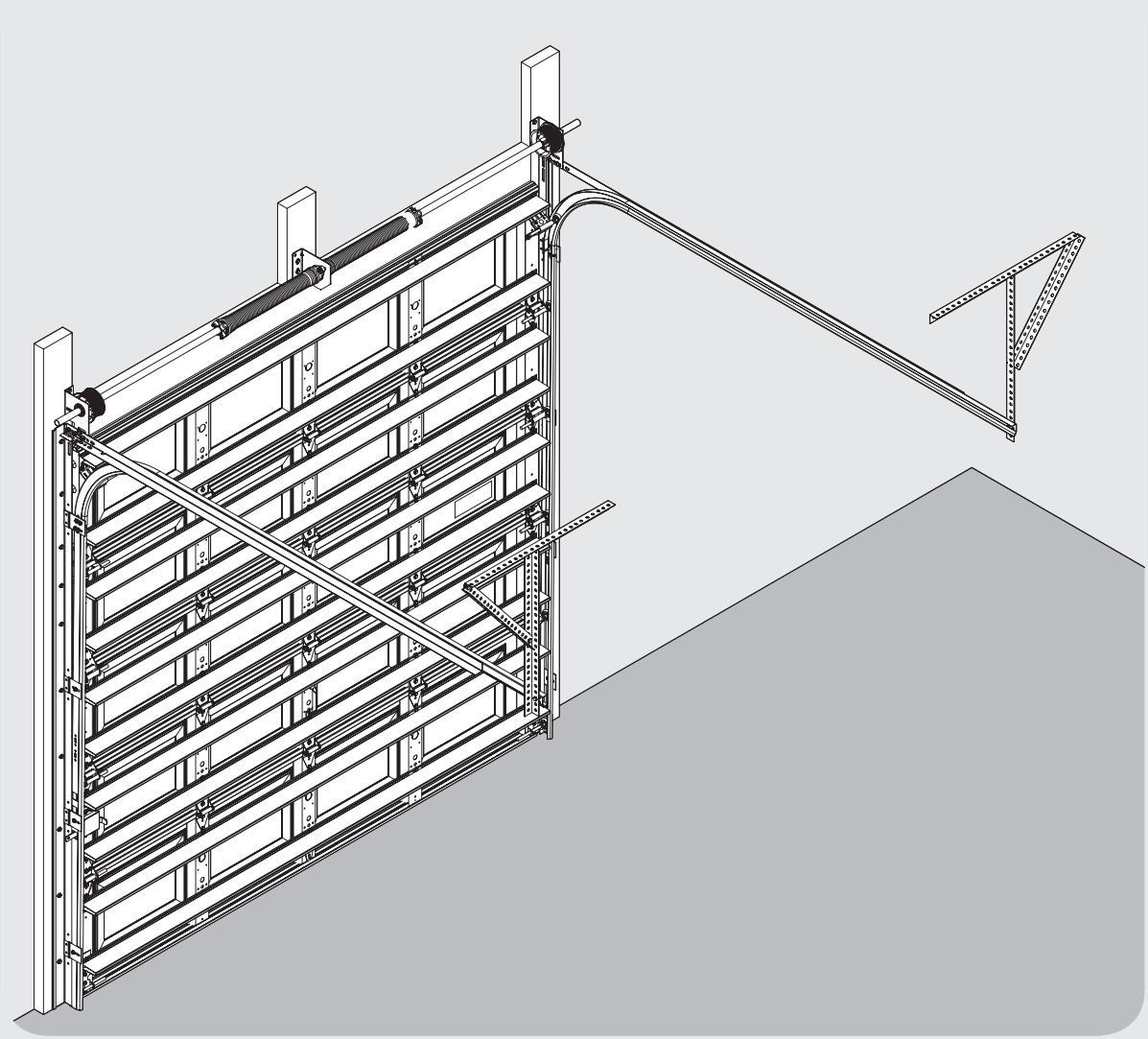
Wayne® Dalton

8000, 8100, 8200 Windload, Light Commercial

Torsion Spring

Installation Instructions and Owner's Manual



Wayne-Dalton, a Division of
Overhead Door Corporation
P.O. Box 67, Mt. Hope, OH 44660
www.Wayne-Dalton.com

IMPORTANT NOTICE!

Read these instructions carefully before attempting installation. If in question about any of the procedures, do not perform the work. Instead, have a trained door systems technician do the installation or repairs.

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Part No. 335381 REV3 08/18/2011

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Definition of key words used in this manual:

⚠ WARNING

INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN SEVERE OR FATAL INJURY.

CAUTION: PROPERTY DAMAGE OR INJURY CAN RESULT FROM FAILURE TO FOLLOW INSTRUCTIONS.

IMPORTANT: REQUIRED STEP FOR SAFE AND PROPER DOOR OPERATION.

NOTE: Information assuring proper installation of the door.

⚠ WARNING

TO AVOID POSSIBLE INJURY, READ THESE INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING INSTALLATION. IF IN QUESTION ABOUT ANY OF THE PROCEDURES, DO NOT PERFORM THE WORK. INSTEAD, HAVE A TRAINED DOOR SYSTEMS TECHNICIAN DO THE INSTALLATION OR REPAIRS.

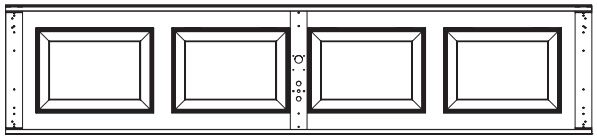
1. **READ AND FOLLOW ALL INSTALLATION INSTRUCTIONS.**
2. Wear protective gloves during installation to avoid possible cuts from sharp metal edges.
3. It is always recommended to wear eye protection when using tools, otherwise eye injury could result.
4. Avoid installing your new door on windy days. Door could fall during the installation causing severe or fatal injury.
5. Doors 12'- 0" wide and wider should be installed by two persons, to avoid possible injury.
6. Operate door ONLY when it is properly adjusted and free from obstructions.
7. If a door becomes hard to operate, inoperative or is damaged, immediately have necessary adjustments and/or repairs made by a trained door system technician using proper tools and instructions.
8. DO NOT stand or walk under a moving door, or permit anybody to stand or walk under an electrically operated door.
9. DO NOT place fingers or hands into open section joints when closing a door. Use lift handles/gripping points when operating door manually.
10. DO NOT permit children to operate garage door or door controls. Severe or fatal injury could result, should the child become entrapped between the door and the floor.
11. Due to constant extreme spring tension, DO NOT attempt any adjustment, repair or alteration to any part of the door, especially to springs, spring brackets, bottom corner brackets, red colored fasteners, cables or supports. To avoid possible severe or fatal injury, have any such work performed by a trained door systems technician using proper tools and instructions.
12. On electrically operated doors, pull down ropes must be removed and locks must be removed or made inoperative in the open (unlocked) position.
13. Top section of door may need to be reinforced when attaching an electric opener. Check door and/or opener manufacturer's instructions.
14. VISUALLY inspect door and hardware monthly for worn and or broken parts. Check to ensure door operates freely.
15. Test electric opener's safety features monthly, following opener manufacturer's instructions.
16. NEVER hang tools, bicycles, hoses, clothing or anything else from horizontal tracks. Track systems are not intended or designed to support extra weight.

After installation is complete, fasten this manual near garage door.

Please Do Not Return This Product To The Store. Contact your local Wayne-Dalton dealer. To find your local Wayne-Dalton dealer, refer to your local yellow pages business listings or go to the Find a Dealer section online at **www.Wayne-Dalton.com**

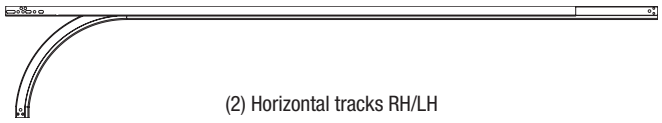
Package Contents

NOTE: DEPENDING ON THE DOOR MODEL, SOME PARTS LISTED WILL NOT BE SUPPLIED IF NOT NECESSARY. REAR SUPPORTS MAY OR MAY NOT BE INCLUDED WITH YOUR DOOR.

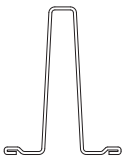


Door sections (as required)

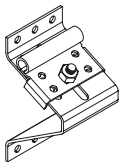
(1) Torsion tube



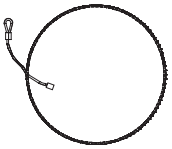
(2) Horizontal tracks RH/LH



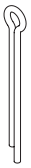
U-bar's
(as required)



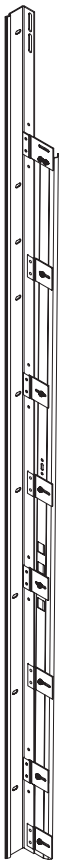
Top bracket assembly
(as required)



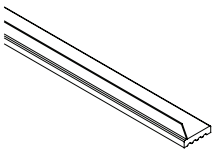
Right and left
counterbalance cables



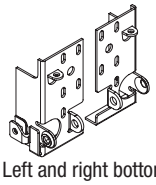
(2) Cotter pin



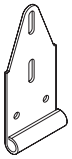
(2) RH/LH Vertical track
assemblies



Weather seal & nails
(if included)



Left and right bottom
brackets



Extension brackets
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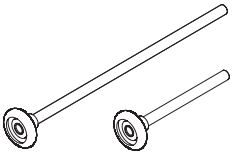
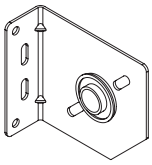
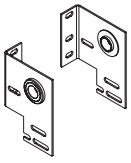


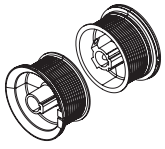
Long and short shaft rollers
(As required)



(1) Center bracket



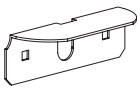
Left and right end
bearing brackets



Left and right cable
drums (as required)

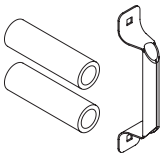
Right and left torsion
springs (as required)

(1) Windload label

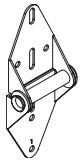


(2) Step plates

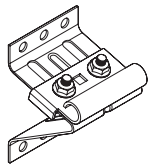
#6 Screw eye and
pull rope
(if included)



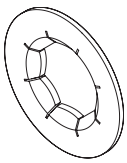
(2) Lift handles &
spacers



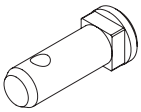
#1, #2, #3, #4, #5,
#6 & #7 hinges
(as required)



Top bracket assemblies
(as required)



Pushnuts
(as required)



(2) Clevis pin

(2) Roller Spacers

(2) Flat Washer

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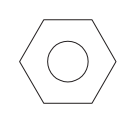
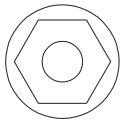
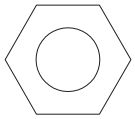
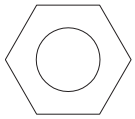
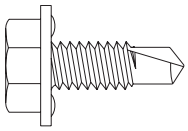
Package Contents Continued...

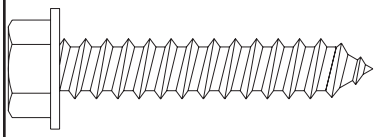

(2) 1/4"- 20 Hex nuts

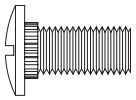

1/4"- 20 Flange hex nuts (as required)

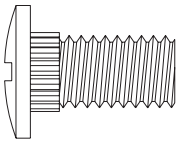

(2) 3/8"- 16 Hex nuts

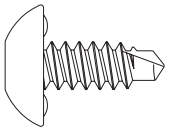

5/16"- 18 Hex nuts (as required)

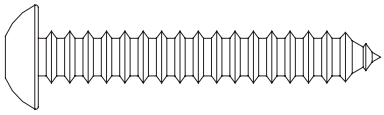

1/4" - 14 x 7/8" Self drilling screws (as required)

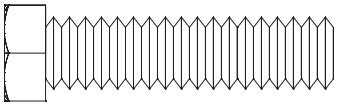

5/16" x 1 5/8" Hex head lag screws (as required)

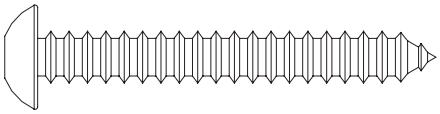

1/4"- 20 x 9/16" Track Bolts (as required)

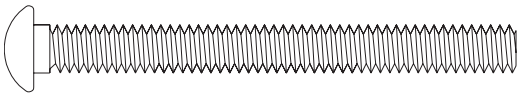

(2) 3/8" - 16 x 3/4" Truss head bolts

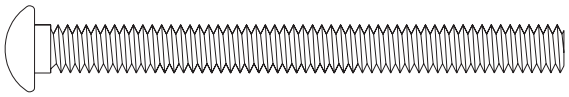

(2) 1/4"- 20 X 5/8" Tamper resistant screws


5/16" x 1 5/8" Tamper resistant lag screw (as required)

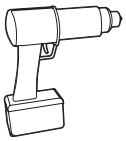

(2) 3/8"- 16 x 1-1/2" Hex head bolts

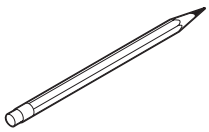

5/16" x 2" Tamper-resistant hex head lag screws (as required)

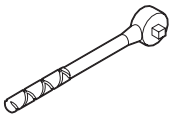

(2) 1/4" x 2- 1/2" Carriage bolts

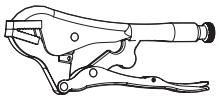

(2) 1/4" x 2-3/4" Carriage bolts

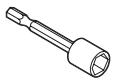
Tools Required


Power drill

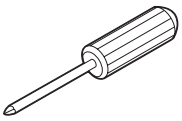

Pencil


Ratchet wrench

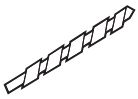

Vice grips

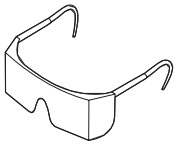

3/8", 7/16" Socket driver

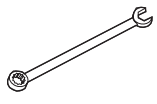
Gloves

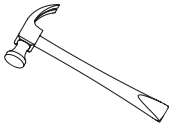

Phillips head screw-driver

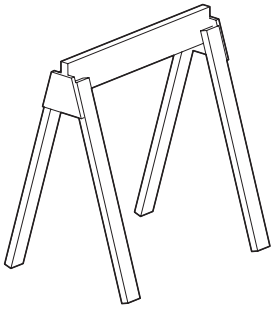
7/16", 1/2" & 9/16" Socket

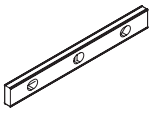

9/32", 1/2", 3/16" & 1/8" Drill bits

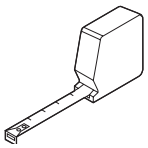

Safety glasses

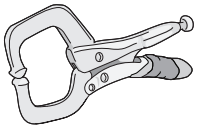

1/4", 3/8", 7/16", 1/2" & 9/16" Wrenches

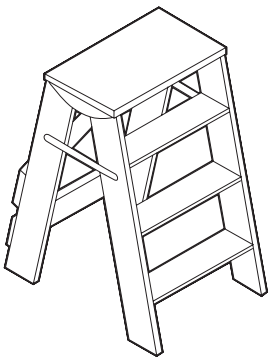

Hammer

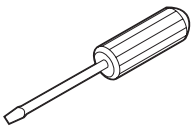

Sawhorse

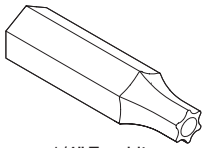

Level

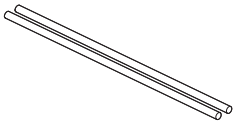

Tape measure


Vice clamps


Step ladder


Flat tip screwdriver


1/4" Torx bit


Approved winding bars

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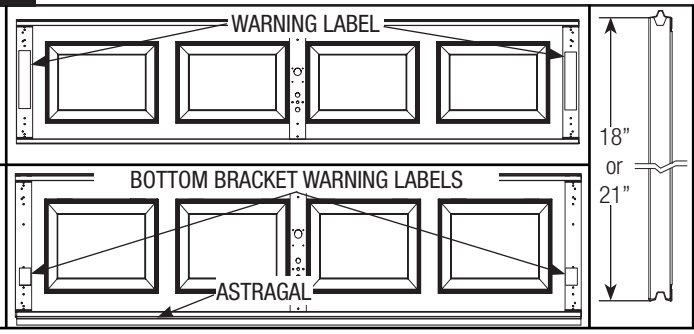
Door Section Identification

INTERMEDIATE I SECTION

BOTTOM SECTION



When installing your door you must use sections of the appropriate height in the right stacking order. What sections heights you need to use in what order depends on the height of your door.

The **BOTTOM SECTION** can be identified by the factory attached bottom astragal, or by the bottom bracket warning labels on each end stile.

The **INTERMEDIATE I SECTION** may have a warning label attached to either right or left hand endstile of the section. This section is always the 3rd section from the bottom of the door.

Door Height	Bottom	Lock (second)	Intermediate I (third)	Intermediate II (fourth)	Intermediate III (fifth)	Intermediate IV (sixth)	Intermediate V (seventh)	Top
8'3"	21"	21"	18"	18"	NA	NA	NA	21"
8'6"	21"	21"	21"	21"	NA	NA	NA	18"
8'9"	21"	21"	21"	21"	NA	NA	NA	21"
9'0"	18"	18"	18"	18"	18"	NA	NA	18"
9'3"	21"	18"	18"	18"	18"	NA	NA	18"
9'6"	21"	18"	18"	18"	18"	NA	NA	21"
9'9"	21"	21"	18"	18"	18"	NA	NA	21"
10'0"	21"	21"	21"	18"	18"	NA	NA	21"
10'3"	21"	21"	21"	21"	21"	NA	NA	18"
10'6"	21"	21"	21"	21"	21"	NA	NA	21"
10'9"	21"	18"	18"	18"	18"	18"	NA	18"
11'0"	21"	18"	18"	18"	18"	18"	NA	21"
11'3"	21"	21"	18"	18"	18"	18"	NA	21"
11'6"	21"	21"	21"	18"	18"	18"	NA	21"
11'9"	21"	21"	21"	21"	18"	18"	NA	21"
12'0"	21"	21"	21"	21"	21"	21"	NA	18"
12'3"	21"	21"	21"	21"	21"	21"	21"	21"
12'6"	21"	18"	18"	18"	18"	18"	18"	21"
12'9"	21"	21"	18"	18"	18"	18"	18"	21"
13'0"	21"	21"	21"	18"	18"	18"	18"	21"
13'3"	21"	21"	21"	21"	18"	18"	18"	21"
13'6"	21"	21"	21"	21"	21"	18"	18"	21"
13'9"	21"	21"	21"	21"	21"	21"	21"	18"
14'0"	21"	21"	21"	21"	21"	21"	21"	21"

Removing An Old Door

IMPORTANT: COUNTERBALANCE SPRING TENSION MUST ALWAYS BE RELEASED BEFORE ANY ATTEMPT IS MADE TO START REMOVING AN EXISTING DOOR.

⚠ WARNING

A POWERFUL SPRING RELEASING ITS ENERGY SUDDENLY CAN CAUSE SEVERE OR FATAL INJURY. TO AVOID INJURY HAVE A TRAINED DOOR SYSTEMS TECHNICIAN, USING PROPER TOOLS AND INSTRUCTIONS, RELEASE THE SPRING TENSION.

For detailed information see supplemental instructions "Removing an Existing Door /Preparing the Opening". These instructions are available at no charge from Wayne-Dalton, a Division of Overhead Door Corporation, P.O. Box 67, Mt. Hope, OH 44660, or at www.Wayne-Dalton.com.

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Preparing the Opening

If you just removed your existing door or you are installing a new door, complete all steps in PREPARING THE OPENING.

To ensure secure mounting of track brackets, side and center bearing brackets, or steel angles to new or retro-fit construction, it is recommended to follow the procedures outlined in DASMA Technical Data Sheets #156, #161 and #164 at www.dasma.com.

The inside perimeter of your garage door opening should be framed with wood jamb and header material. The jambs and header must be securely fastened to sound framing members. It is recommended that 2" x 6" lumber be used. The jambs must be plumb and the header level. The jambs should extend a minimum of 14" (356 mm) above the top of the opening for Torsion spring applications. For low headroom applications, the jambs should extend to the ceiling height. Minimum side clearance required, from the opening to the wall, is 3-1/2" (89 mm).

IMPORTANT: CLOSELY INSPECT EXISTING JAMBS, HEADER AND MOUNTING SURFACE. ANY WOOD FOUND NOT TO BE SOUND, MUST BE REPLACED.

For Torsion spring applications, a suitable mounting surface must be firmly attached to the wall, above the header at the center of the opening. The mounting surface must be 2" x 6" lumber minimum (Select southern yellow pine lumber. Do not use lumber marked as spruce-pine-fur or SPF). The mounting surface must be securely attached to the wall with four (4) 3/8" anchors for masonry constructions or four (4) 5/16" x 4" lag screws for wood construction.

NOTE: Drill a 3/16" pilot hole in the mounting surface to avoid splitting the lumber. Do not attach the mounting surface with nails.

⚠ WARNING

FAILURE TO SECURELY ATTACH A SUITABLE MOUNTING PAD TO STRUCTURALLY SOUND FRAMING MEMBER COULD CAUSE SPRINGS TO VIOLENTLY PULL MOUNTING PAD FROM WALL, RESULTING IN SEVERE OR FATAL INJURY.

Weather Seal (May Not Be Included):
Cut the weather seal if necessary to fit the header and jambs.

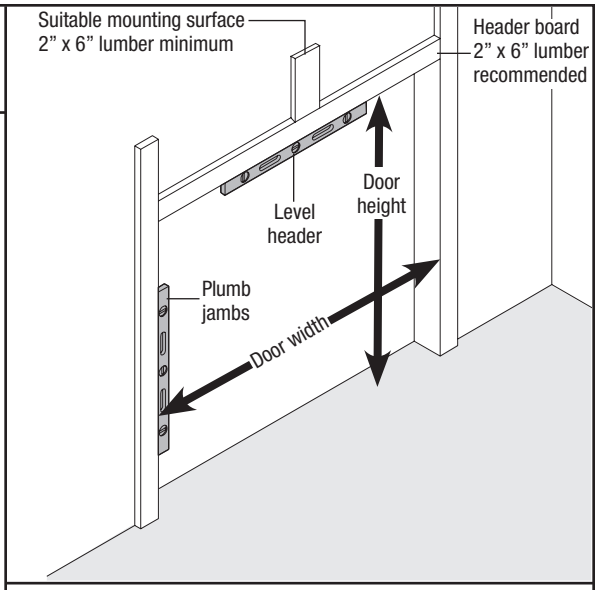
Align the header seal with the inside edge of the header and temporarily secure it to the header with equally spaced nails. Next, fit the jamb seals up tight against the header seal and flush with the inside edge of the jamb. Temporarily secure the jamb seals with equally space nails. This will keep the bottom section from falling out of the opening during installation. Equally space nails approximately 12" to 18" apart.

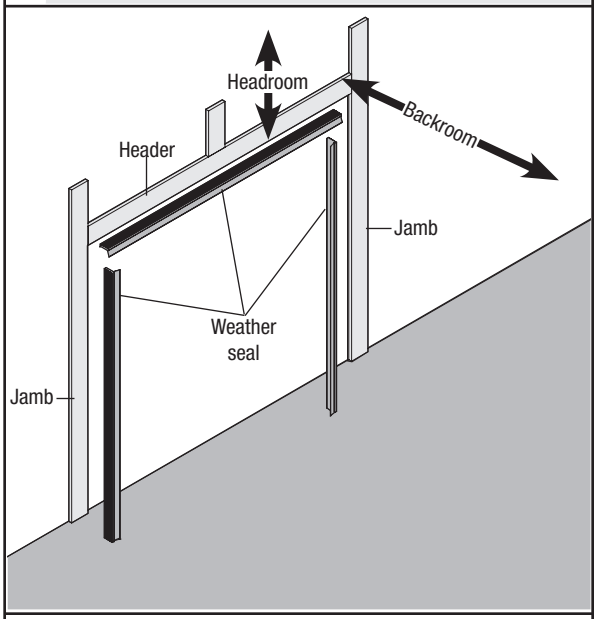
NOTE: Do not permanently attach weather seal to the jamb at this time.

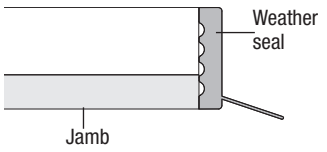
HEADROOM REQUIREMENT: Headroom is defined as the space needed above the top of the door for tracks, springs, etc. to allow the door to open properly. If the door is to be motor operated, 2-1/2" (64 mm) of additional headroom is required.

BACKROOM REQUIREMENT: Backroom is defined as the distance needed from the opening back into the garage to allow the door to open fully.

NOTE: For door heights from 10'1" to 14'0", refer to your operator manufacture installation instructions for appropriate depth into room.







WEATHER SEAL

TRACK TYPE	Torsion
12"	12 1/2"
15"	14 1/2"

HEADROOM REQUIREMENT

DOOR HEIGHT	TRACK	MANUAL LIFT	MOTOR OPERATED
8'3" - 9'0"	12", 15" Radius	126"	168"
9'3" - 10'0"	12", 15" Radius	138"	168"
10'1" - 12'0"	12", 15" Radius	162"	-
12'1" - 14'0"	12", 15" Radius	186"	-

BACKROOM REQUIREMENT

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Installation

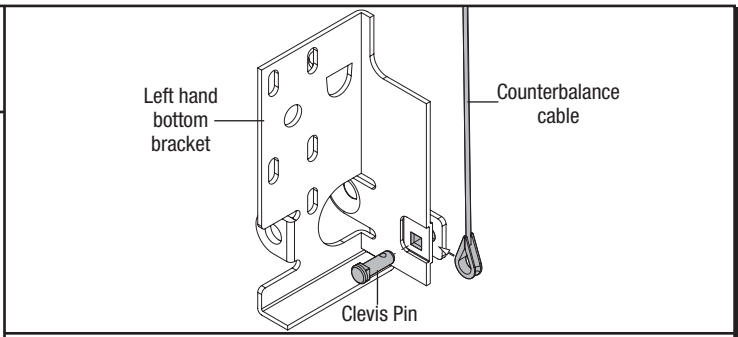
Begin the installation of the door by checking the opening. It must be the same size as the door. Vertical jambs must be plumb and level with header. Side clearance, from edge of door to wall, must be a minimum of 3-1/2" (89mm) on each side.
IMPORTANT: STAINLESS STEEL OR PT 2000 COATED LAG SCREWS (NOT SUPPLIED) MUST BE USED WHEN INSTALLING CENTER BEARING BRACKETS, END BRACKETS, JAMB BRACKETS, OPERATOR MOUNTING/SUPPORT BRACKETS AND DISCONNECT BRACKETS ON TREATED LUMBER (PRESERVATIVE-TREATED). STAINLESS STEEL OR PT 2000 COATED LAG SCREWS ARE NOT NECESSARY WHEN INSTALLING PRODUCTS ON UN-TREATED LUMBER.
IMPORTANT: WHEN INSTALLING 5/16" DIAMETER LAG SCREWS USING AN ELECTRIC DRILL/DRIVER, THE DRILL/DRIVER'S CLUTCH MUST BE SET TO DELIVER NO MORE THAN 200 IN. LBS. OF TORQUE. FASTENER FAILURE COULD OCCUR AT A HIGHER SETTING.
NOTE: It is recommended that 5/16" lag screws be pilot drilled using a 3/16" drill bit, prior to fastening.
NOTE: Use this manual in conjunction with the windload specification sheet provided with your door.

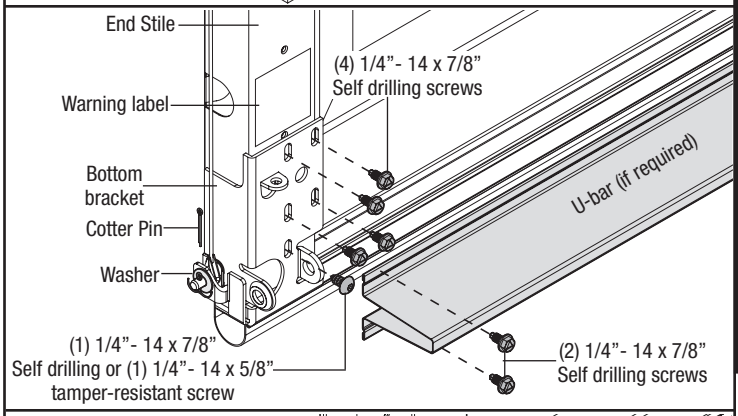
1

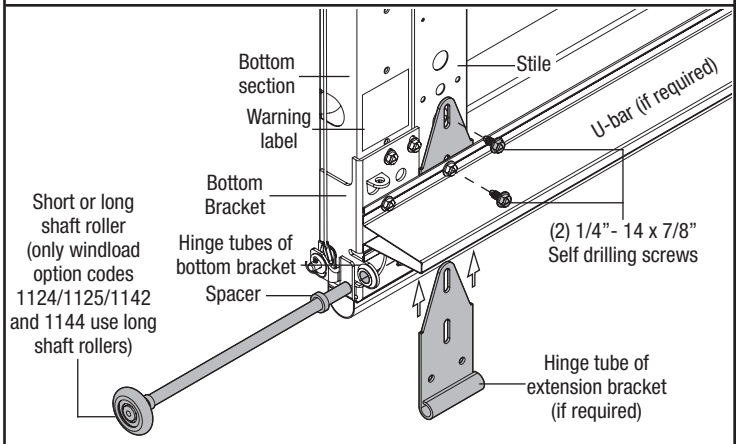
Bottom Bracket

Tools Needed:
Power Drill
7/16" Socket Driver
Pliers
1/4" Torx bit

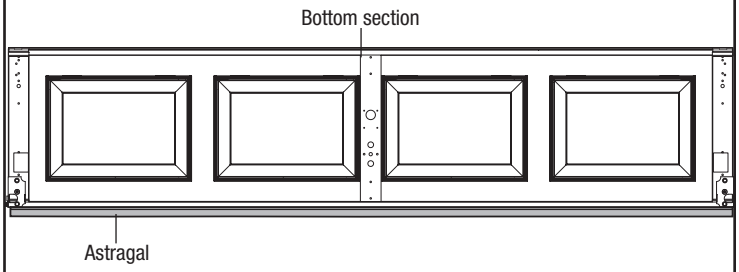
NOTE: For door section identification see page 5.
Uncoil the counterbalance cables and secure the cable loop to the clevis pin and bottom bracket using a 5/16" flat washer and cotter pin. Repeat for other bottom bracket.
IMPORTANT: RIGHT AND LEFT HAND IS ALWAYS DETERMINED FROM INSIDE THE GARAGE LOOKING OUT.
Locate the bottom section, attach the left hand bottom bracket to the end stile using (4) 1/4"-14 x 7/8" self drilling screws and (1) 1/4"-14 x 5/8" tamper-resistant self drilling screw as shown. Repeat for other side.
NOTE: All doors are provided with the tamper resistant fastener for the bottom brackets. However, the professional installer is most likely to have the proper tool to install this fastener. If the homeowner does not have the proper tool to install the tamper resistant fastener, use a regular 1/4" - 14 x 7/8" self drilling screw in its place.
Refer to the u-bar schedule (bottom of page) to determine if the bottom section requires a u-bar.
U-bar attachment (if required): Position the u-bar over the bottom brackets and center the u-bar side to side on the bottom section. Secure the u-bar to the bottom section using (2) 1/4"-14 x 7/8" self drilling screws at each end and center stile location(s).
NOTE: If you have windload specification option codes 1124, 1125, 1142 and 1144: Extension brackets and long shaft rollers are required. Position the extension bracket flush against the end stile and slide it underneath the u-bar (if applicable). Align the extension bracket with the bottom bracket by inserting a long shaft roller with spacer through the bottom bracket and extension bracket hinge tubes. Attach the extension bracket to the endstile with (2) 1/4" - 14 x 7/8" self drilling screws as shown. Repeat for other side.
NOTE: Verify astragal (bottom seal) is aligned with door section. If there is more than 1/2" excess astragal on either side, trim astragal even with door section.




End Stile
(4) 1/4"- 14 x 7/8" Self drilling screws
Warning label
Bottom bracket
Cotter Pin
Washer
U-bar (if required)
(1) 1/4"- 14 x 7/8" Self drilling or (1) 1/4"- 14 x 5/8" tamper-resistant screw
(2) 1/4"- 14 x 7/8" Self drilling screws


Bottom section
Stile
Warning label
U-bar (if required)
Bottom Bracket
Short or long shaft roller (only windload option codes 1124/1125/1142 and 1144 use long shaft rollers)
Hinge tubes of bottom bracket
(2) 1/4"- 14 x 7/8" Self drilling screws
Spacer
Hinge tube of extension bracket (if required)

U-Bar Schedule				
Door height	Section	Position on section	Windload Option codes	
			1143/1144	1104/1123/1124/1125/ 1141/1142
8' 3" to 8' 9"	Bottom	Bottom	(1) Req.	(1) Req.
9' 0" to 10' 6"			NA	(1) Req.
10' 9" to 12' 3"			NA	(1) Req.
12' 6" to 14' 0"			NA	(1) Req.



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2

Hinges

Tools Needed:
Power Drill
7/16" Socket Driver

NOTE: Refer to the door section identification on page 5 to determine your lock (second), intermediate I (third), intermediate II (fourth), intermediate III (fifth), intermediate IV (sixth), intermediate V (seventh) and top sections. Measure your sections to make sure they are the correct height as indicated on the chart.

Locate the bottom section, using #1 hinges for the end stiles and depending on the width of your door, enough #1 hinge(s) for each of the center stile(s) location.

NOTE: The #1 hinges serve as end hinges and center hinges on the bottom section. The #1 hinges also serve as center hinges at all center hinge locations.

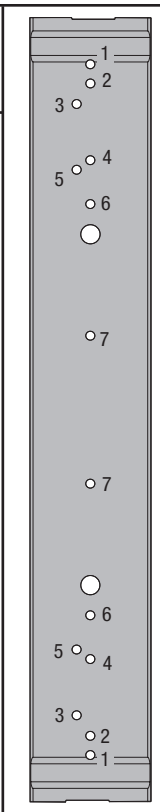
Place the hinges on the section so that the lower (#) leaf of the hinge is over the pre-punched holes in the #1 and #4 of the end stiles and the pre-punched holes of the center stile(s) at the top of the section.

Secure the hinges to the section using (2) 1/4" - 14 x 7/8" self tapping screws for each, then insert the roller into the appropriate end hinge tube.

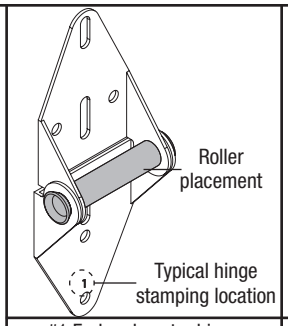
Repeat for all other sections using #2 end hinges second section (lock section), or the #3 end hinges third section (intermediate section), or the #4 end hinges fourth section (intermediate section II), or the #5 end hinges fifth section (intermediate section III), or the #6 end hinges sixth section (intermediate section IV), or the #7 seventh section (intermediate section V) of the door.

NOTE: If you have windload option codes 1124, 1125, 1142, or 1144: Double end hinges and long shaft roller are required on each end of each section.

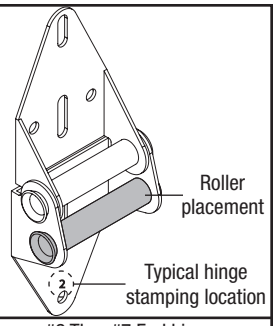
IMPORTANT: WHEN PLACING ROLLERS INTO END HINGES NUMBER 2 AND HIGHER, THE ROLLER GOES INTO TUBE FURTHEST AWAY FROM SECTION.



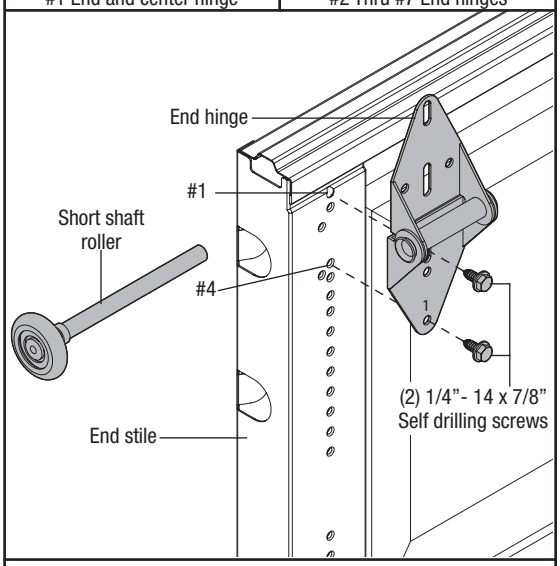
END STILE HOLE PATTERN (LEFT SIDE IS SHOWN. RIGHT SIDE IS OPPOSITE.)



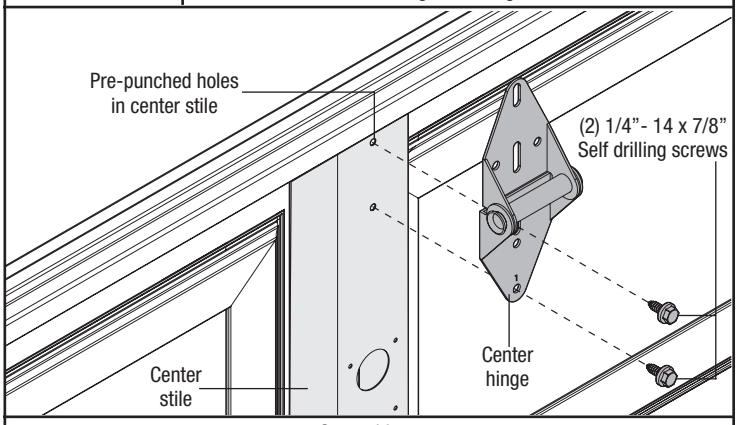
#1 End and center hinge



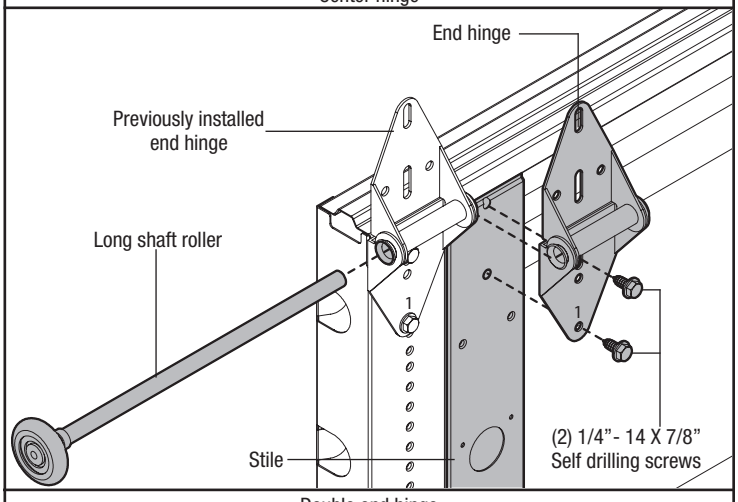
#2 Thru #7 End hinges



Single end hinge



Center hinge



Double end hinge

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3

Top Bracket

Tools Needed:
Power Drill
7/16" Socket Driver
7/16" Wrench

NOTE: For door section identification see page 5.

NOTE: Refer to illustrations **(A)** or **(B)** to determine which top bracket was supplied with your door. Follow the corresponding step below:

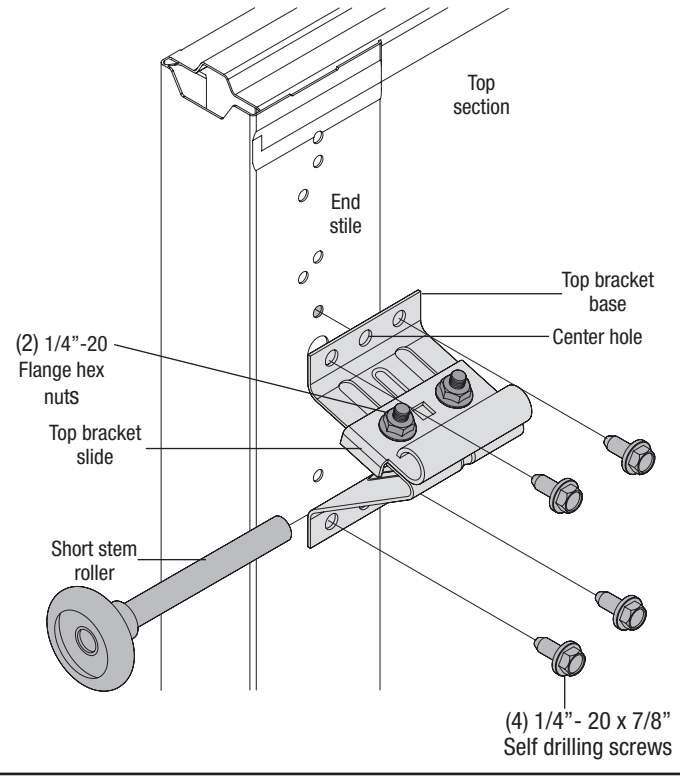
FOR TOP BRACKET (A): Align upper-center hole of the top bracket base with #6 hole in the end stile (See End Stile Hole Pattern on Pg 8). Ensure the top bracket base is level and aligned with the edge of the section. Secure the top bracket assembly to the endstile using (4) 1/4" - 20 x 7/8" self drilling screws.

Insert a short shaft roller into the top bracket slide. The top bracket slide will be adjusted and tightened in Step 14. Repeat for the opposite side.

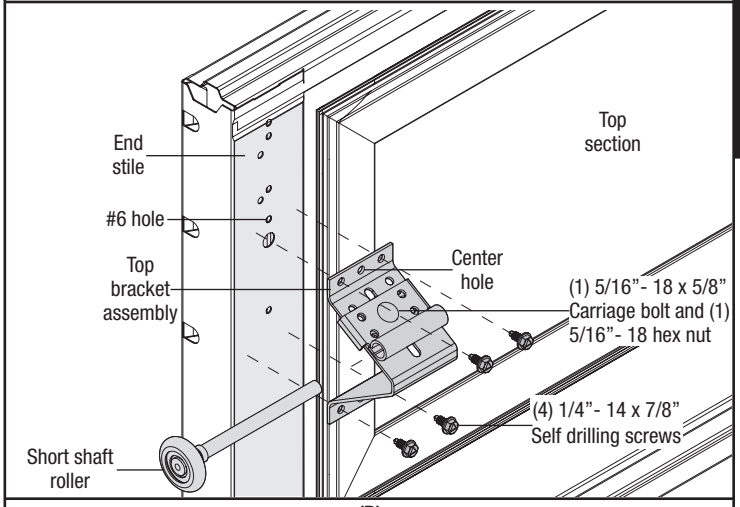
FOR TOP BRACKET (B): Align upper-center hole of the top bracket base with #6 hole in the end stile (See End Stile Hole Pattern on Pg 8). Ensure the top bracket base assembly is level and aligned with the edge of the section. Secure the top bracket assembly to the endstile using (4) 1/4" - 14 x 7/8" self drilling screws. Loosen the 5/16" - 18 nut on the top bracket assembly. Insert a short shaft roller into the top bracket slide. The top bracket slide will be adjusted and tightened in Step 15. Repeat for the opposite side.

NOTE: For windload specification option codes 1124, 1125, 1142 and 1144, do not insert a short shaft roller.

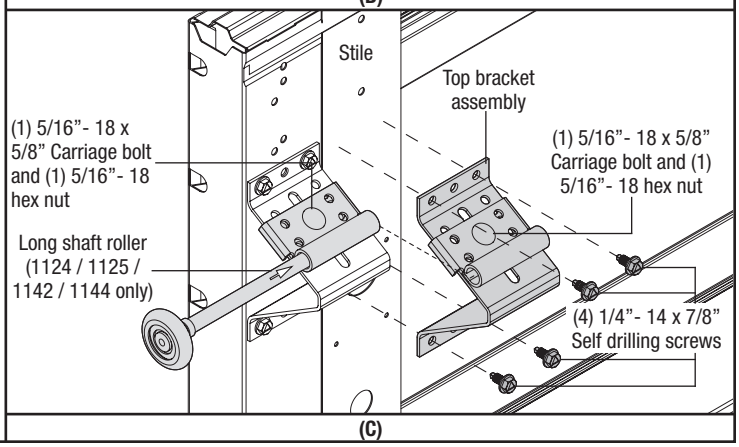
NOTE: If you have windload specification option codes 1124, 1125, 1142 and 1144**:** Two top bracket assemblies and a long shaft roller are required **(C)**. Loosen the 5/16" - 18 nut on the top bracket assembly and position it flush against the stile, and centered on the stile. Insert a long shaft roller through both slides of the top bracket assembly's to align. Secure the top bracket assembly to stile using (4) 1/4" - 20 x 7/8" self drilling screws. The top bracket slides will be adjusted and tightened in Step 14. Repeat for other side.



(A)


End stile
Top section
#6 hole
Top bracket assembly
Center hole
(1) 5/16"- 18 x 5/8" Carriage bolt and (1) 5/16"- 18 hex nut
(4) 1/4"- 14 x 7/8" Self drilling screws
Short shaft roller

(B)


Stile
Top bracket assembly
(1) 5/16"- 18 x 5/8" Carriage bolt and (1) 5/16"- 18 hex nut
(1) 5/16"- 18 x 5/8" Carriage bolt and (1) 5/16"- 18 hex nut
Long shaft roller (1124 / 1125 / 1142 / 1144 only)
(4) 1/4"- 14 x 7/8" Self drilling screws

(C)

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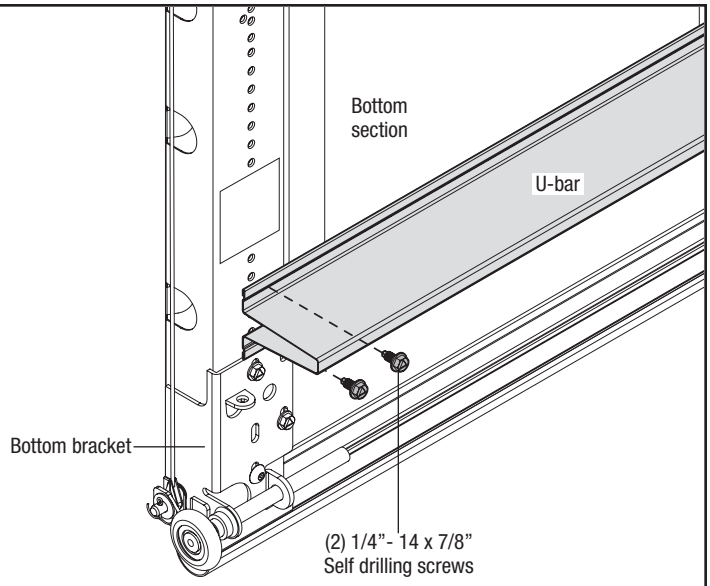
4 Bottom Section U-Bar

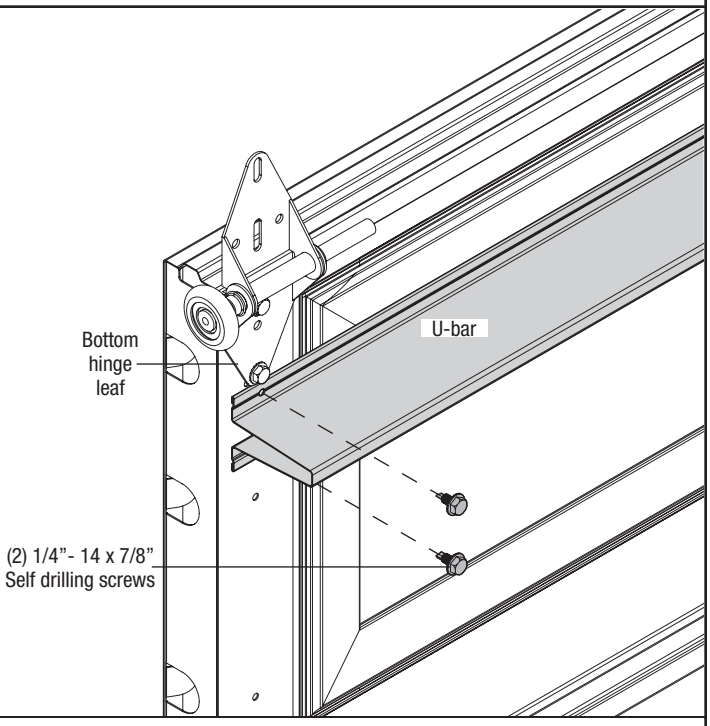
Tools Needed:
Power Drill
7/16” Socket Driver
Sawhorses

NOTE: For door section identification see page 5.

Refer to the u-bar schedule to determine the required number of u-bar(s), and placement on bottom section.

Place the bottom section face down on a couple of sawhorses or flat clean / smooth surface. Position the u-bars according to the u-bar schedule, up against bottom hinge leafs or just above the bottom brackets on the bottom section. Center the u-bars side to side on the section, and secure using (2) 1/4” -14 x 7/8” self drilling screws at each end stile and center stile location.





U-Bar Schedule

Door height	Section	Position on section	Windload Options Code			
			1100 / 1101	1102 / 1103 / 1104 / 1123 / 1124 / 1125 / 1141 / 1142	1120 / 1121 / 1122 / 1140	1143 / 1144
8’ 3” to 8’ 9”	Bottom	Bottom	NA	NA	(1) Req.	NA
		Top	NA	(1) Req.	(1) Req.	(1) Req.
9’ 0” to 10’ 6”		Bottom	NA	NA	(1) Req.	NA
		Top	NA	(1) Req.	(1) Req.	NA
10’ 9” to 12’ 3”		Bottom	NA	NA	(1) Req.	NA
		Top	NA	(1) Req.	(1) Req.	NA
12’ 6” to 14’ 0”		Bottom	NA	NA	(1) Req.	NA
		Top	NA	(1) Req.	(1) Req.	NA

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5 Lock/Intermediate Section U-Bar

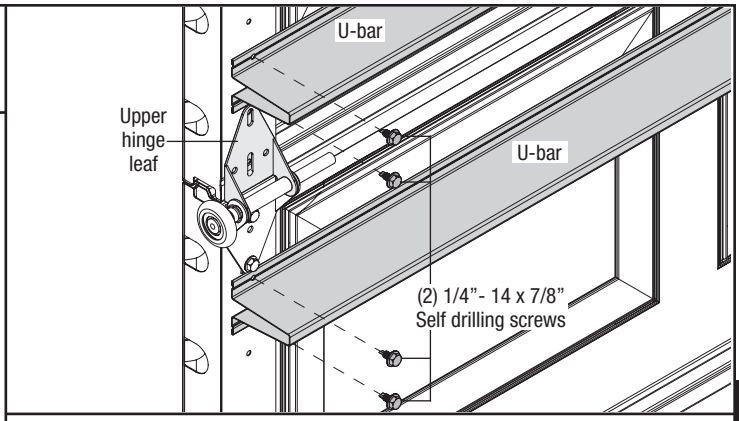
Tools Needed:
Power Drill
7/16" Socket Driver
Sawhorses

NOTE: For door section identification see page 5.

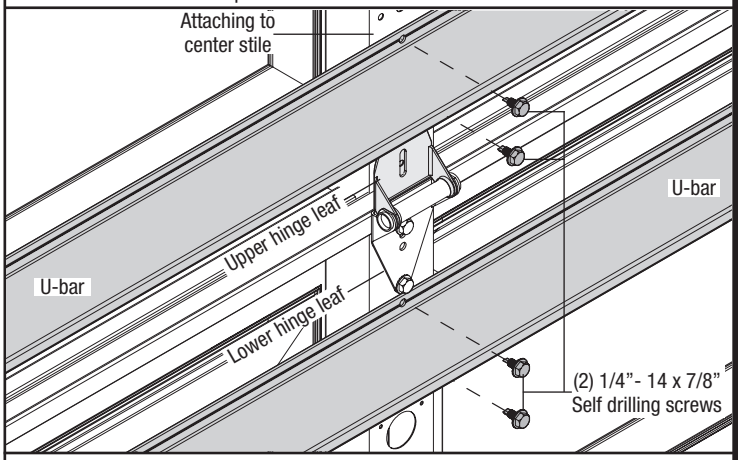
Place the lock, intermediate I, intermediate II, intermediate III, intermediate IV and intermediate V sections face down on a couple of sawhorses or flat clean/ smooth surface. Butt the top and intermediate sections together in the proper stack sequence and flip up the hinges.

Refer to the u-bar schedule to determine the required number of u-bar(s), and placement on top section.

Position the u-bars according to the u-bar schedule, and flush against the upper or lower hinge leafs. Center the u-bars side to side on the section, and secure using (2) 1/4" -14 x 7/8" self drilling screws at each end stile and center stile location.



End U-bar placement for lock and intermediate sections



Center U-bar placement for lock and intermediate sections

U-Bar Schedule

Door height	Section	Position on section	Windload Options Code							
			1100 / 1101	1102	1103	1104 / 1120 / 1121	1122 / 1123 / 1124 / 1141	1125 / 1142	1140	1143 / 1144
8' 3" to 8' 9"	Lock	Bottom	(1) Req.	NA	NA	NA	NA	(1) Req.	(1) Req.	NA
		Top	NA	NA	(1) Req.	(1) Req.	(1) Req.	(1) Req.	(1) Req.	(1) Req.
	Intermediate I	Bottom	NA	(1) Req.	NA	NA	(1) Req.	(1) Req.	(1) Req.	NA
		Top	(1) Req.	NA	(1) Req.	(1) Req.	(1) Req.	(1) Req.	(1) Req.	(1) Req.
	Intermediate II	Bottom	NA	NA	NA	(1) Req.	NA	(1) Req.	NA	(1) Req.
		Top	(1) Req.	(1) Req.	(1) Req.	(1) Req.	(1) Req.	(1) Req.	(1) Req.	(1) Req.
9' 0" to 10' 6"	Lock	Bottom	(1) Req.	NA	NA	NA	NA	(1) Req.	(1) Req.	NA
		Top	NA	NA	(1) Req.	(1) Req.	(1) Req.	(1) Req.	(1) Req.	NA
	Intermediate I	Bottom	NA	(1) Req.	NA	NA	(1) Req.	(1) Req.	(1) Req.	NA
		Top	(1) Req.	NA	(1) Req.	(1) Req.	(1) Req.	(1) Req.	(1) Req.	NA
	Intermediate II	Bottom	NA	NA	NA	NA	NA	(1) Req.	NA	NA
		Top	NA	(1) Req.	(1) Req.	(1) Req.	(1) Req.	(1) Req.	(1) Req.	NA
	Intermediate III	Bottom	(1) Req.	NA	NA	(1) Req.	(1) Req.	(1) Req.	(1) Req.	NA
		Top	NA	NA	(1) Req.	(1) Req.	(1) Req.	(1) Req.	(1) Req.	NA
(10' 9" to 12' 3") and (12' 6" to 14' 0")	Lock	Bottom	(1) Req.	NA	NA	NA	NA	(1) Req.	(1) Req.	NA
		Top	NA	NA	(1) Req.	(1) Req.	(1) Req.	(1) Req.	(1) Req.	NA
	Intermediate I	Bottom	NA	(1) Req.	NA	NA	(1) Req.	(1) Req.	(1) Req.	NA
		Top	(1) Req.	NA	(1) Req.	(1) Req.	(1) Req.	(1) Req.	(1) Req.	NA
	Intermediate II	Bottom	NA	NA	NA	NA	NA	(1) Req.	NA	NA
		Top	NA	(1) Req.	(1) Req.	(1) Req.	(1) Req.	(1) Req.	(1) Req.	NA
	Intermediate III	Bottom	(1) Req.	NA	NA	(1) Req.	(1) Req.	(1) Req.	(1) Req.	NA
		Top	NA	NA	(1) Req.	(1) Req.	(1) Req.	(1) Req.	(1) Req.	NA
	Intermediate IV	Bottom	NA	(1) Req.	NA	NA	NA	(1) Req.	(1) Req.	NA
		Top	(1) Req.	NA	(1) Req.	(1) Req.	(1) Req.	(1) Req.	(1) Req.	NA
12' 6" to 14' 0"	Intermediate V	Bottom	NA	NA	NA	NA	(1) Req.	(1) Req.	(1) Req.	NA
		Top	NA	(1) Req.	(1) Req.	(1) Req.	(1) Req.	(1) Req.	(1) Req.	NA

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6

Top Section U-Bar

Tools Needed:
Power Drill
7/16” Socket Driver
Sawhorses

NOTE: For door section identification see page 5.

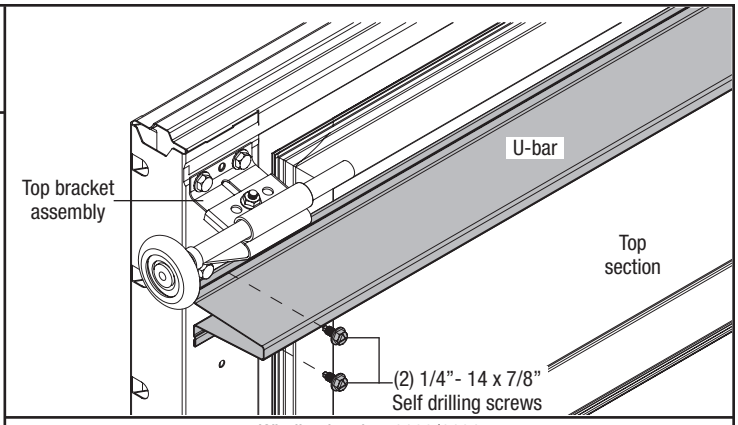
Place the top and intermediate sections face down on a couple of sawhorses or flat clean/ smooth surface. Butt the top and intermediate sections together in the proper stack sequence and flip up the hinges.

Refer to the u-bar schedule to determine the required number of u-bar(s), and placement on top section.

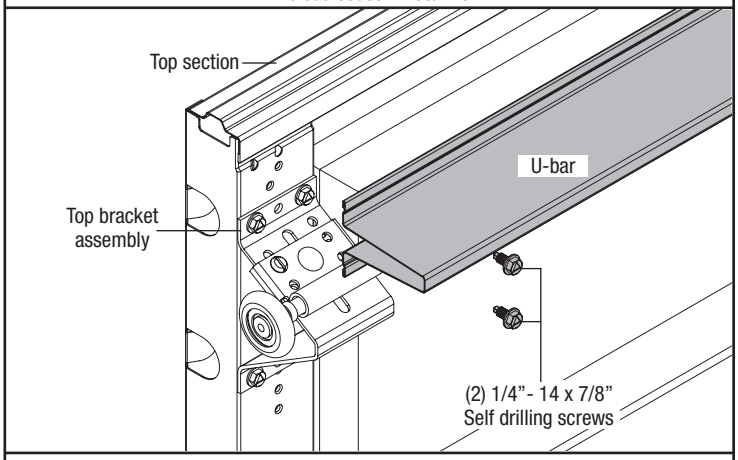
Position the u-bar either up against top bracket assembly, align top edge of u-bar with top edge of top section, or up against upper hinge leafs. Center the u-bars side to side on the section and secure using (2) 1/4” -14 x 7/8” self drilling screws at each end stile and center stile location.

NOTE: If you have windload codes 1100 and 1101 the u-bar is positioned below the top bracket assembly.

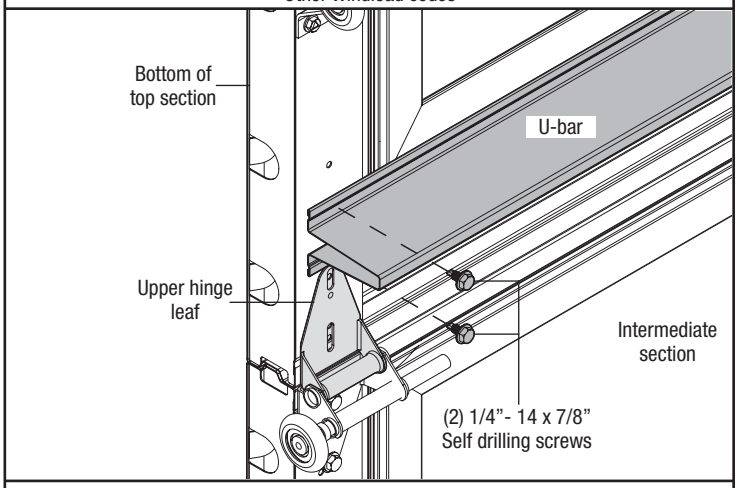
NOTE: For windload codes other than 1100 and 1101 the u-bar is positioned above the top bracket assembly.



Windload codes: 1100/1101



Other Windload codes



Bottom of top section

U-Bar Schedule

Door height	Section	Position on section	Windload Options Code					
			1100 / 1101	1102	1103 / 1104 / 1120 / 1121	1122 / 1123 / 1124 / 1141	1125 / 1140 / 1142	1143 / 1144
8’ 3” to 8’ 9”	Top	Bottom	NA	NA	NA	(1) Req.	(1) Req.	NA
		Top	NA	(1) Req.	(1) Req.	(1) Req.	(1) Req.	(1) Req.
9’ 0” to 10’ 6”		Bottom	NA	(1) Req.	NA	NA	(1) Req.	NA
		Top	(1)*Req.	NA	(1) Req.	(1) Req.	(1) Req.	NA
10’ 9” to 12’ 3”		Bottom	NA	NA	NA	(1) Req.	(1) Req.	NA
		Top	NA	(1) Req.	(1) Req.	(1) Req.	(1) Req.	NA
12’ 6” to 14’ 0”		Bottom	(1) Req.	NA	NA	NA	(1) Req.	NA
		Top	NA	NA	(1) Req.	(1) Req.	(1) Req.	NA

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7

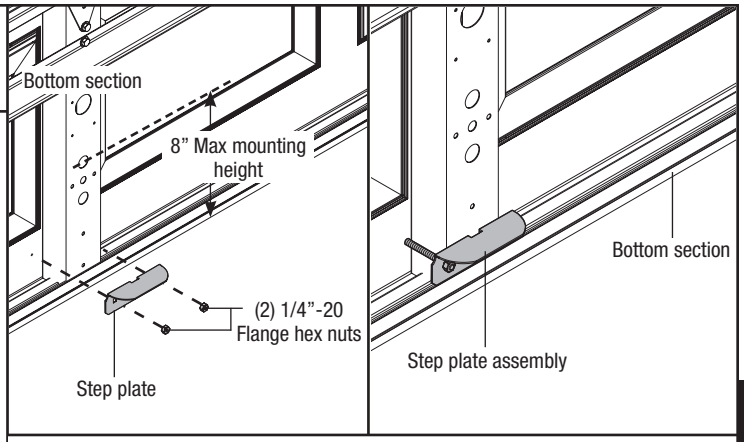
Step Plate

Tools Needed:
Pencil
Power Drill
5/16" Drill Bit
7/16" Wrench

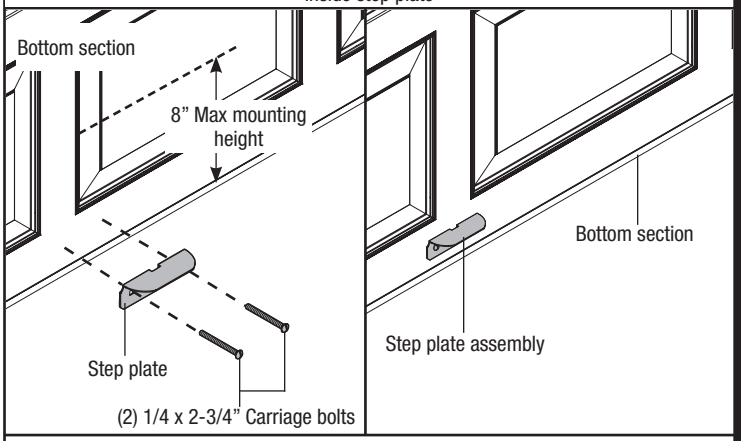
Locate the center most stile of the bottom section of the door.

On the inside of the door, center the step plate/lift handle on the center most stile no higher than 8" from the bottom of the door. Using the step plate/lift handle holes as a guide, drill a 5/16" dia. hole along each side of the stile through the face of the door. Be extremely careful to keep drill straight.

Mount step plates / lift handles back to back, straddling stile. Secure with (2) 1/4" x 2-3/4" carriage bolts and 1/4"-20 flange hex nuts.



Inside step plate



Outside step plate

8

Lift Handle

Tools Needed:
Tape Measure
Pencil
Power Drill
9/32" Drill Bit
1/2" Drill Bit
7/16" Wrench

NOTE: Doors with a keyed lock do not require this lift handle.

NOTE: For door section identification see page 5.

Locate the inside center most stile or the desired lift handle location on the lock (2nd) section of the door. Position the lower hole in the lift handle 4" from the bottom of the second section.

Vertical align the lift handle, use the lift handle as a template and mark the hole locations on the section.

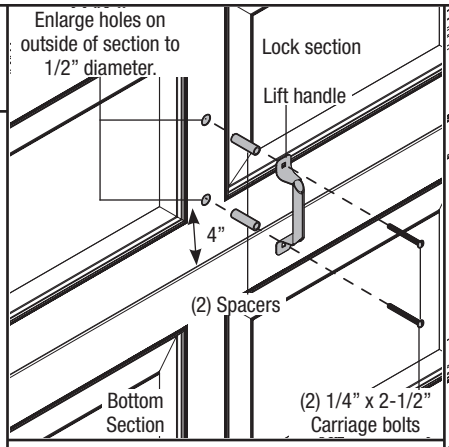
Drill (2) 9/32" dia. holes through section. Enlarge the holes from outside the door to 1/2" dia.

Assemble the outside and inside lift handle to the section using (2) 1/4" x 2-1/2" carriage bolts and nuts and (2) spacers.

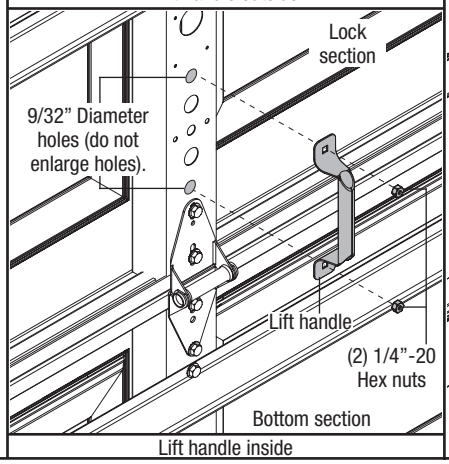
NOTE: Do not drill through or enlarge holes on the inside of the door.

⚠ WARNING

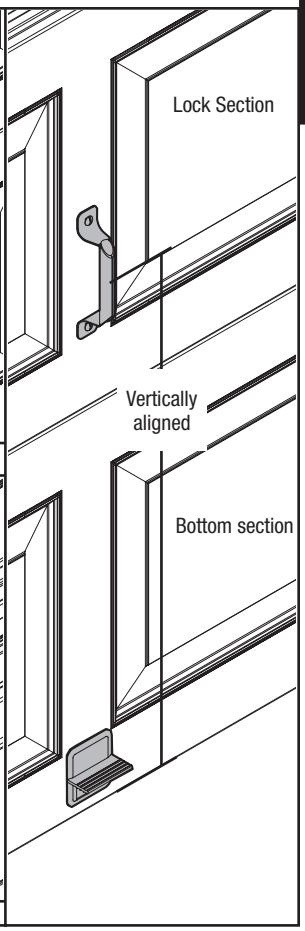
TO AVOID POSSIBLE INJURY, LIFT HANDLES THAT ARE INSTALLED WITHIN 4 INCHES (102 MM) OF A SECTION INTERFACE SHALL PROMOTE VERTICAL ORIENTATION OF THE HAND.



Lift handle outside



Lift handle inside



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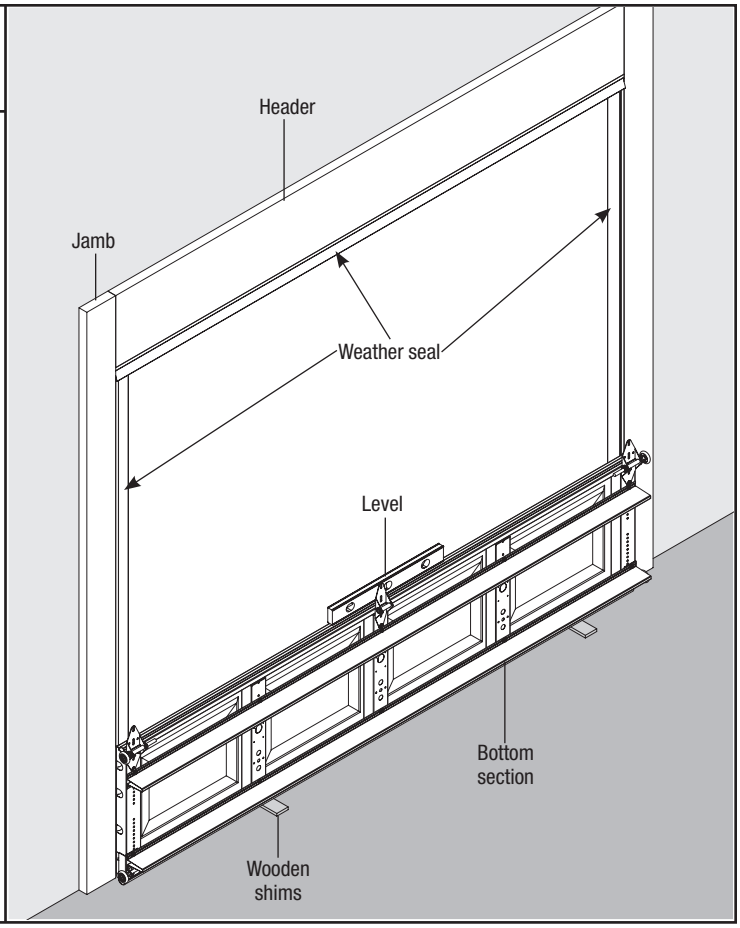
9 Bottom Section

Tools Needed:
Level
Wood Shims

Center the bottom section in the door opening. Level section using wooden shims under the bottom astragal if necessary. Hold the section in the opening while attaching vertical tracks.



10 Vertical Track Assembly

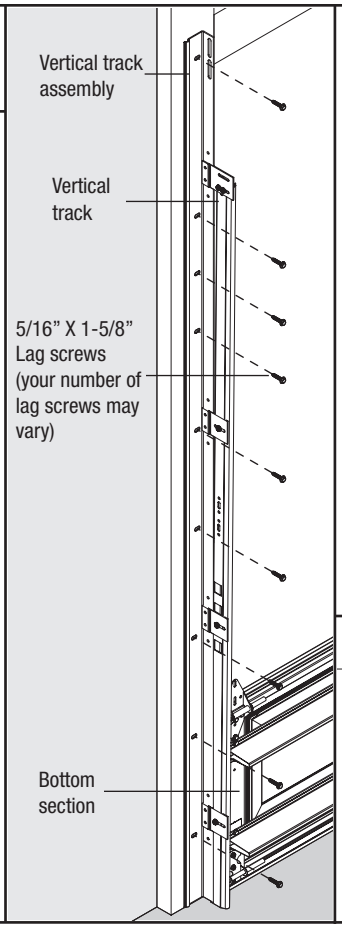
Tools Needed:
Power Drill
3/16" Drill Bit
7/16" Socket Driver
Level
Tape Measure
Step Ladder
7/16" Wrench
Flat tip screwdriver

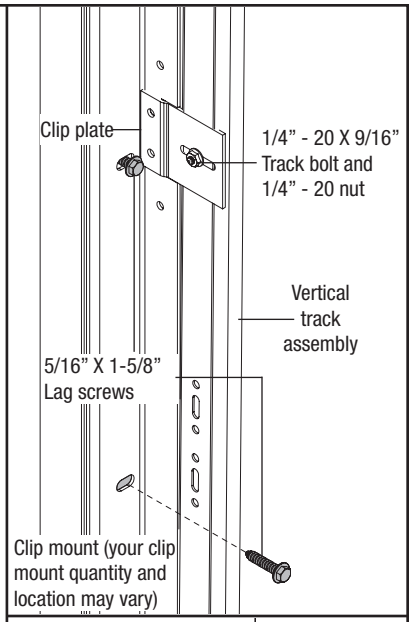
IMPORTANT: THE TOPS OF THE VERTICAL TRACKS MUST BE LEVEL FROM SIDE TO SIDE. IF THE BOTTOM SECTION WAS SHIMMED TO LEVEL IT. THE VERTICAL TRACK ON THE SHIMMED SIDE, MUST BE RAISED THE HEIGHT OF THE SHIM.

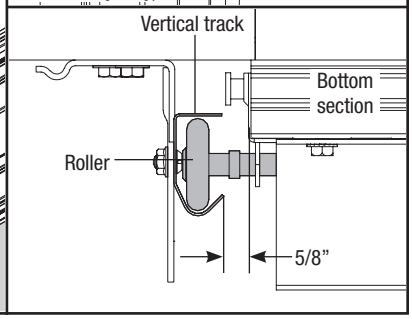
Position the left hand vertical track assembly over the rollers of the bottom section. Make sure the counterbalance cable is located between the rollers and the door jamb. Drill 3/16" pilot holes for the lag screws. Loosely fasten the vertical track assembly to the jamb using 5/16" x 1-5/8" lag screws. Tighten bottom lag screw securing vertical track assembly to jamb, to maintain 5/8" spacing. Repeat for the right hand side.

Loosen the 1/4" - 20 x 9/16" track bolts and 1/4" - 20 nuts of each clip plates. The vertical track assemblies will be adjusted and tightened in Step 13.

Hang counterbalance cables over vertical track assemblies.




Clip plate
1/4" - 20 X 9/16" Track bolt and 1/4" - 20 nut
Vertical track assembly
5/16" X 1-5/8" Lag screws
Clip mount (your clip mount quantity and location may vary)



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11

Stacking Sections

Tools Needed:
Power Drill
7/16” Socket Driver

NOTE: For door section identification see page 5.

NOTE: Make sure hinges are flipped down, when stacking another section on top.

With assistance, lift second section and guide rollers into the vertical tracks. Keeping the ends of the sections aligned, install remaining section(s), except top section, in same manner.

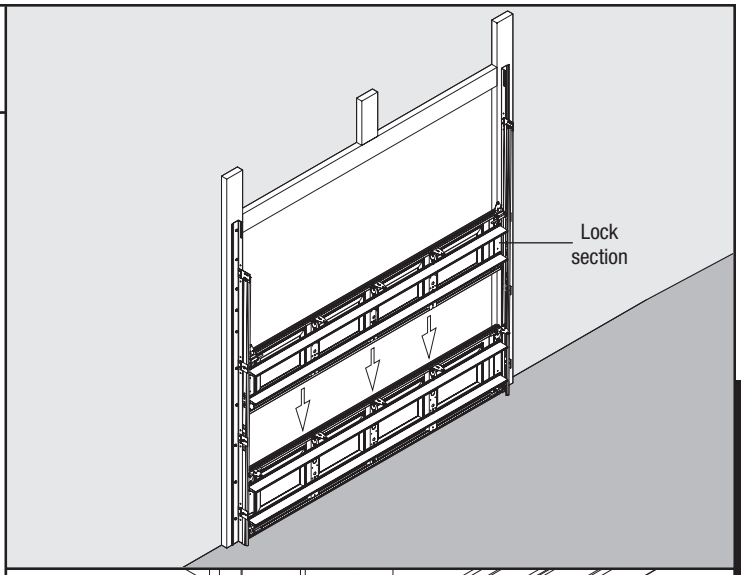
Starting with the center most hinge, flip up the hinge leaf, and hold it tight against section. Secure it to the section using (2) 1/4”- 14 x 7/8” self drilling screws. Repeat for all remaining center hinges.

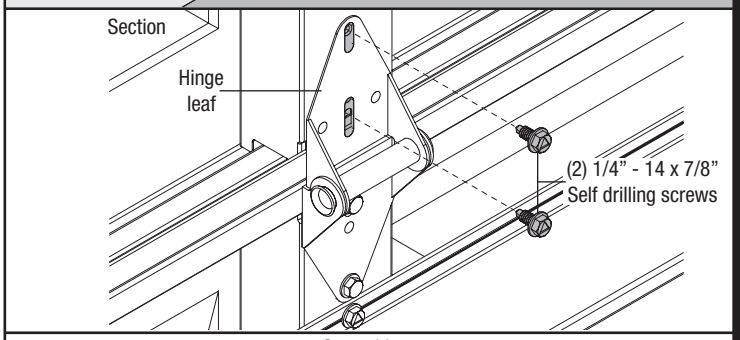
For single end hinges: flip end hinge leaf upward and fasten the hinge to the above section with (4) 1/4”-14 x 7/8” self tapping screws. Repeat for the right hand end hinge(s).

For double end hinges: flip up both end hinge leafs and secure the hinges to the above section with (6) 1/4”-14 x 7/8” self tapping screws. Repeat for the right hand end hinge(s).

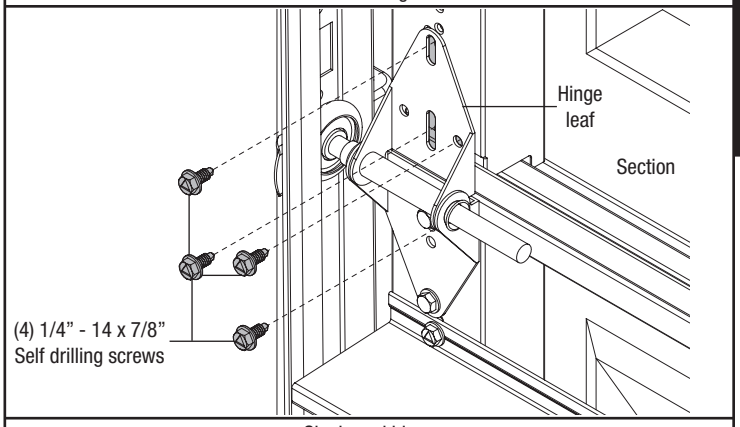
Repeat for other sections except the top section.

NOTE: Install lock at this time (sold separately). See side lock instructions on page 25.

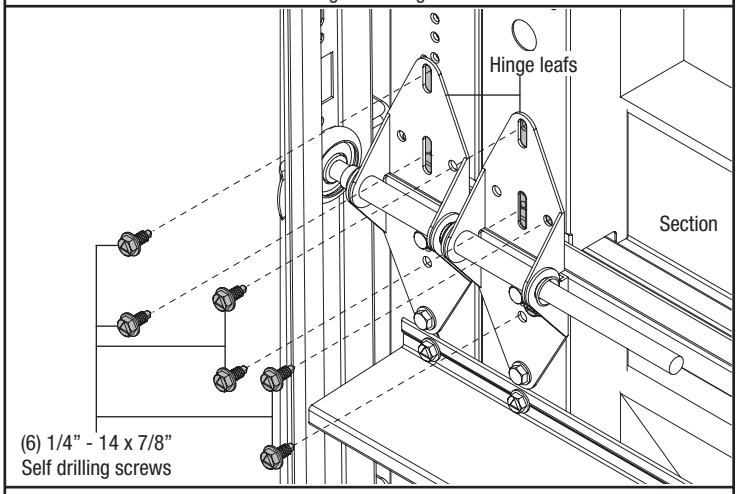




Center hinge



Single end hinge



Double end hinge

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12

Top Section

Tools Needed:
Hammer
Nail
Power Drill
7/16 Socket Driver
Tape Measure
Step Ladder
7/16" Wrench
Flat tip screwdriver

Place the top section in the opening and vertically align with lower sections.

Temporarily secure the top section by driving a nail in the header near the center of the section and bending it over the top section.

Now flip up hinge leaf, hold tight against section and fasten center hinges first, and end hinges last. (Refer to Step 11).

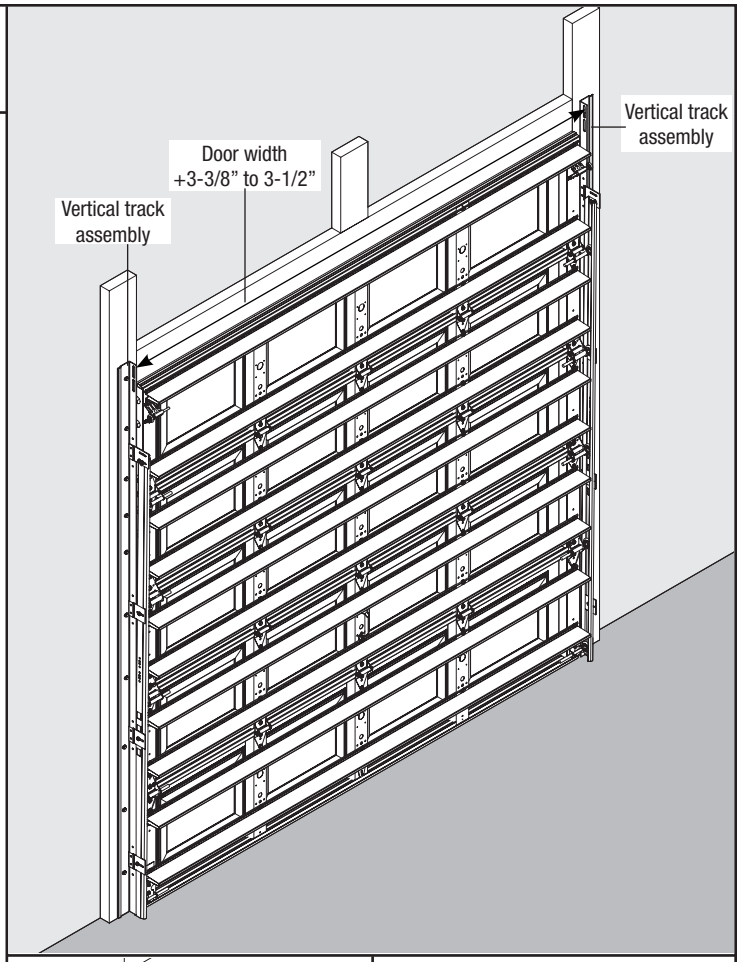
Position vertical track assemblies between 1-11/16" (43 mm) to 1-3/4" (44 mm) from the edge of the door. Tighten the bottom lag screw. Vertical track assemblies must be parallel to the door section.

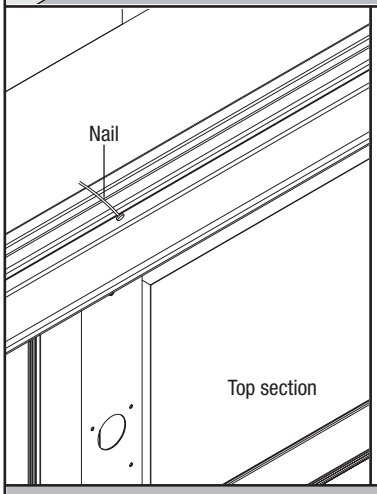
Repeat for opposite side.

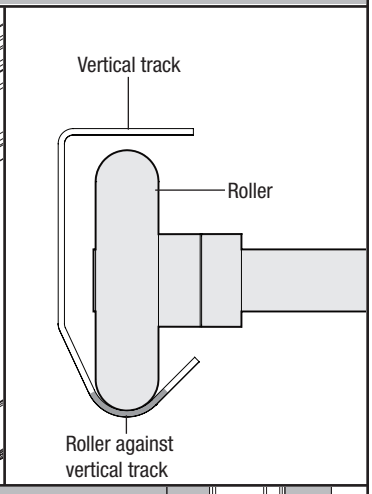
IMPORTANT: THE DIMENSION BETWEEN THE VERTICAL TRACK ASSEMBLIES MUST BE DOOR WIDTH PLUS 3-3/8" (86MM) TO 3-1/2" (89 MM) FOR SMOOTH, SAFE DOOR OPERATION.

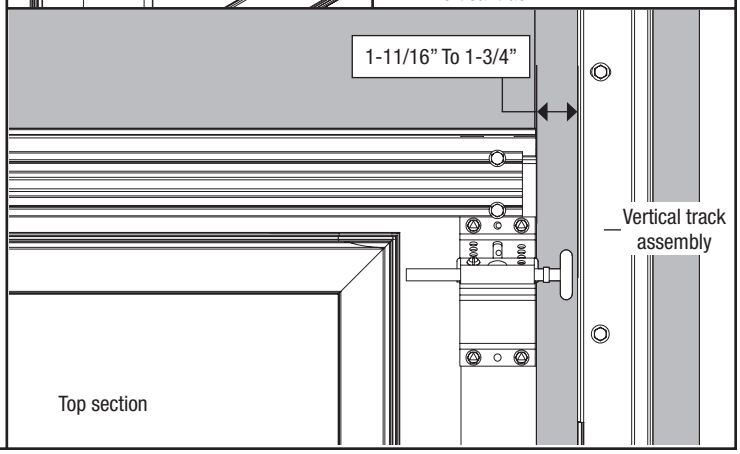
Complete the vertical track installation by tightening all lag screws. Push the vertical track against the rollers so that the rollers are touching the deepest part of the curved side of the track (see illustration); tighten all the track bolts and nuts.

Repeat for opposite side.









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13

Attaching Adjustable Horizontal Track

Tools Needed:
9/16" Socket
7/16" Socket
Ratchet Wrench
9/16" Wrench
Level
Hammer
Flat Tip Screwdriver
Step Ladder

To install horizontal track, place the curved end over the top roller. Align the bottom of the horizontal track with the vertical track. Hand tighten the horizontal track to the vertical track assembly with (2) 1/4"-20 x 9/16" track bolts and (2) 1/4" - 20 flange hex nuts.

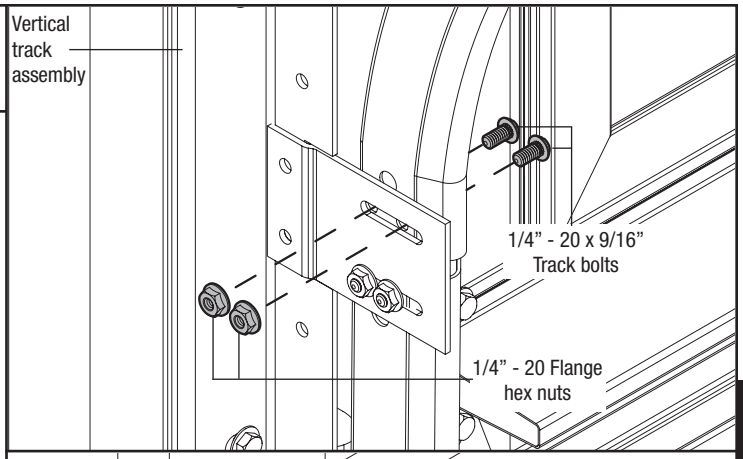
⚠ WARNING

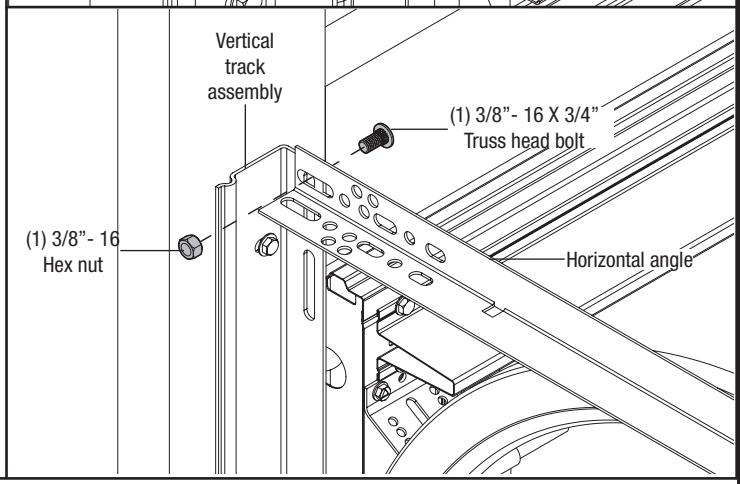
DO NOT RAISE DOOR UNTIL HORIZONTAL TRACKS ARE SECURED AT REAR, AS OUTLINED IN STEP 23, OR DOOR COULD FALL FROM OVERHEAD POSITION CAUSING SEVERE OR FATAL INJURY.

Level the horizontal track and bolt the horizontal angle to the slot in the vertical track assembly using (1) 3/8" - 16 x 3/4" truss head bolt and (1) 3/8" - 16 hex nut. Repeat for other side.

Remove the nail that was temporarily holding the top section in place, installed in Step 12.

IMPORTANT: FAILURE TO REMOVE NAIL BEFORE ATTEMPTING TO RAISE DOOR COULD CAUSE PERMANENT DAMAGE TO TOP SECTION.





14

Adjusting Top Brackets

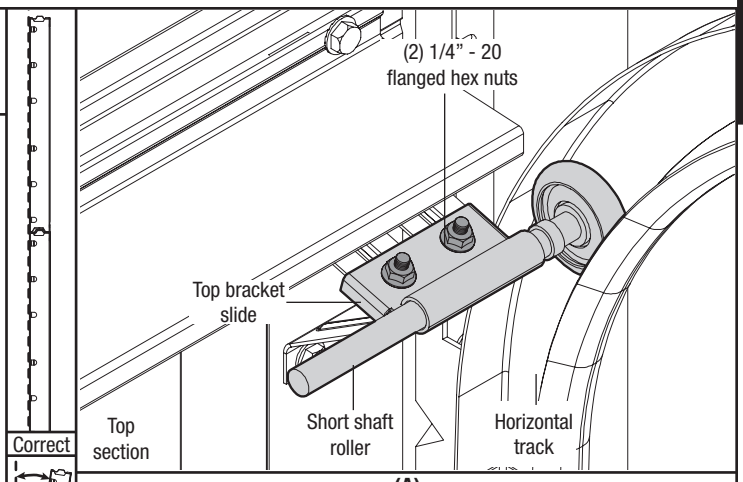
Tools Needed:
7/16" Wrench
1/2" Wrench
Step Ladder

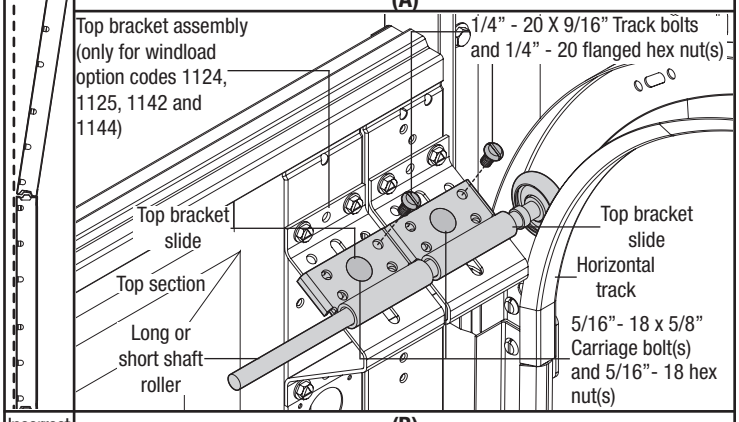
With horizontal tracks installed you can adjust the top brackets. Vertically align the top section with the lower sections. Once aligned, position the top roller in the adjustable slide(s), out against the horizontal track.

For top bracket (A): Maintaining the slide(s) position, tighten the (2) 1/4" - 20 flange hex nuts.

For top bracket (B): Maintaining the slide(s) position, tighten the (1) 5/16" - 18 nut(s) to secure the slide(s) to the top bracket base(s). Now lock each slide in position using (1) 1/4" - 20 x 9/16" track bolt and (1) 1/4" - 20 hex nut through any aligning hole. Repeat for other slides.

NOTE: If you have windload option codes 1124, 1125, 1142, or 1144: (2) slides are required to be adjusted and tightened on each end of section.
Repeat for other side.




Incorrect
Top bracket assembly (only for windload option codes 1124, 1125, 1142 and 1144)
1/4" - 20 X 9/16" Track bolts and 1/4" - 20 flanged hex nut(s)
Top bracket slide
Top section
Long or short shaft roller
Top bracket slide
Horizontal track
5/16"- 18 x 5/8" Carriage bolt(s) and 5/16"- 18 hex nut(s)
(B)

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15

Pushnuts

Tools Needed:
Tape Measure
Step Ladder

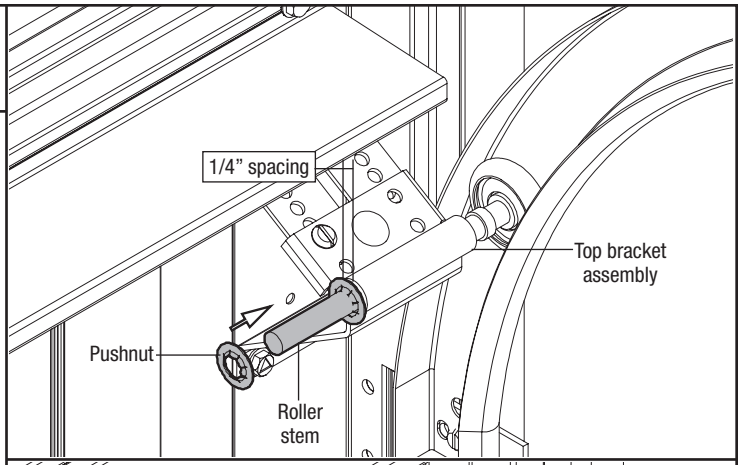
NOTE: If you have windload option codes 1121, 1122, 1123, 1124, 1125, 1141 and 1142, pushnuts are required. If not, skip this step and continue with step 16.

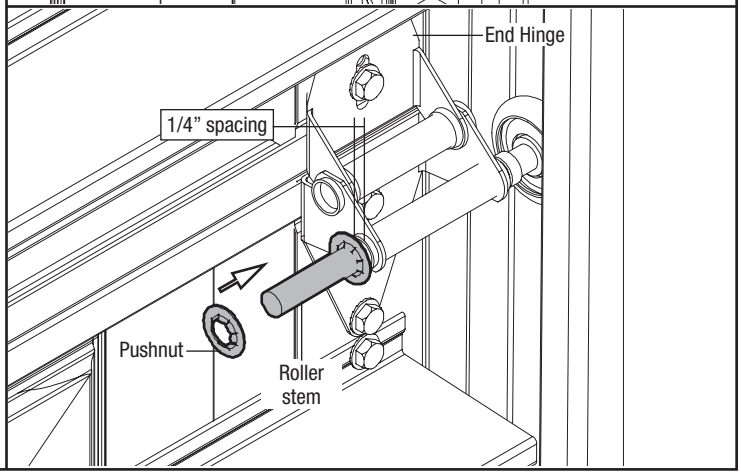
IMPORTANT: ACCURATELY POSITIONING THE PUSHNUT ONTO THE ROLLER STEM IS CRITICAL. ONCE THE PUSHNUT IS PUSHED ONTO THE ROLLER STEM, THE TABS MAKING CONTACT WITH THE STEEL SURFACE, WILL MAKE IT DIFFICULT TO REPOSITION THE PUSHNUT.

NOTE: When positioning the pushnut onto roller stem, ensure the tabs on the pushnut are pointing away from roller stem.

Starting with the top bracket assembly, slide (1) pushnut over the roller stem and push the pushnut towards the outside edge of top bracket assembly leaving 1/4" spacing between the outside edge of top bracket assembly and pushnut.

Repeat same process for the end hinges on the left hand side of door, then repeat same process for other side of door.





16

Torsion End Bearing Brackets

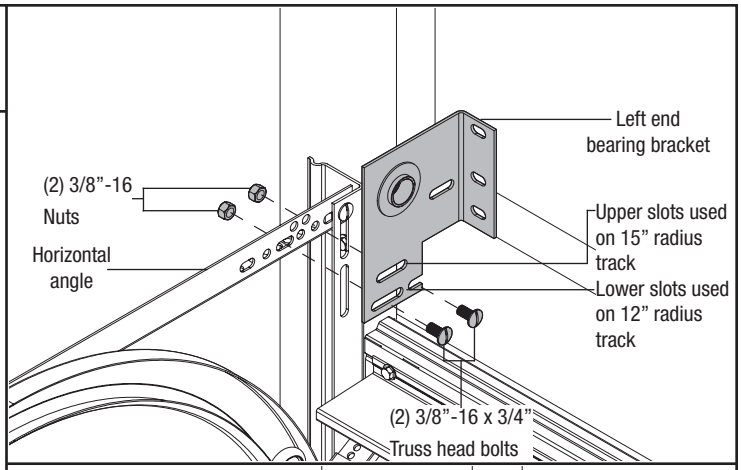
Tools Needed:
Power Drill
7/16" Socket Driver
9/16" Socket
Ratchet Wrench
9/16" Wrench
Step Ladder

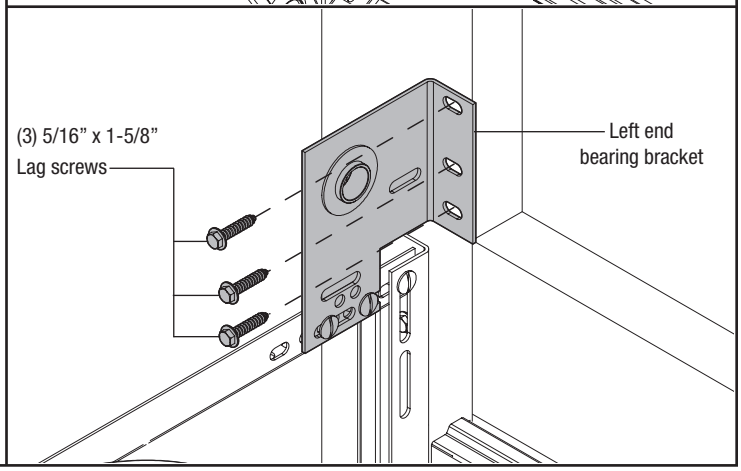
IMPORTANT: RIGHT AND LEFT HAND IS ALWAYS DETERMINED FROM INSIDE THE BUILDING LOOKING OUT.

End bearing brackets are right and left. Using the upper slots in the end bearing bracket, position above the flagangle and secure the end bearing bracket to the horizontal angle using (2) 3/8"-16 x 3/4" truss head bolts and (2) 3/8"-16 nuts.

IMPORTANT: END BEARING BRACKETS MUST BE ATTACHED THROUGH THE LOWER SLOTS ON 12" RADIUS TRACK. 15" RADIUS TRACK MUST USE THE UPPER SLOTS ON THE BRACKET.

Once the bracket is secured to the horizontal angle, secure the top of the end bearing bracket to the jamb using (3) 5/16" x 1-5/8" lag screw. Repeat for other side.


Left end bearing bracket
(2) 3/8"-16 Nuts
Horizontal angle
Upper slots used on 15" radius track
Lower slots used on 12" radius track
(2) 3/8"-16 x 3/4" Truss head bolts



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17

Torsion Spring Assembly

Tools Needed:
Step Ladder

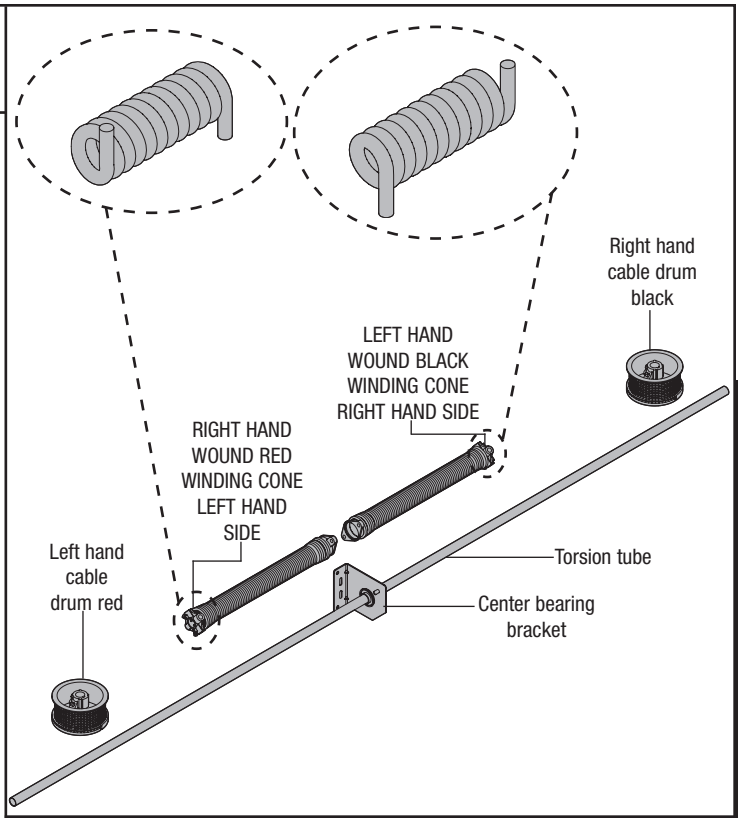
IMPORTANT: RIGHT AND LEFT HAND IS ALWAYS DETERMINED FROM INSIDE THE BUILDING LOOKING OUT.

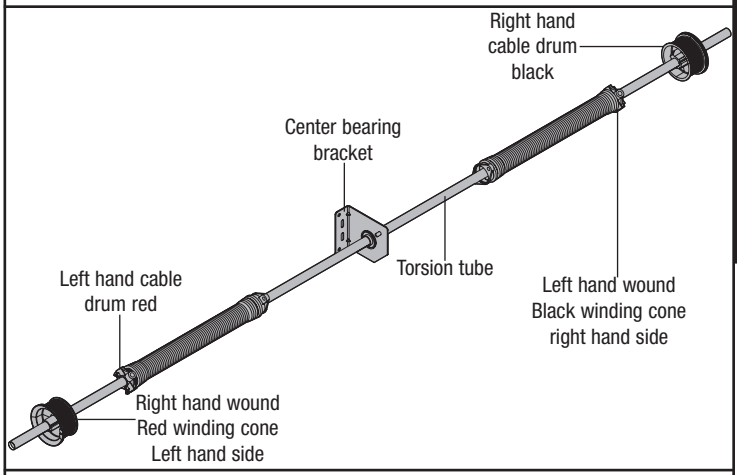
NOTE: Identify the springs provided as either right hand wound (red winding cone), which goes on the LEFT HAND SIDE or left hand wound (black winding cone), which goes on the RIGHT HAND SIDE.

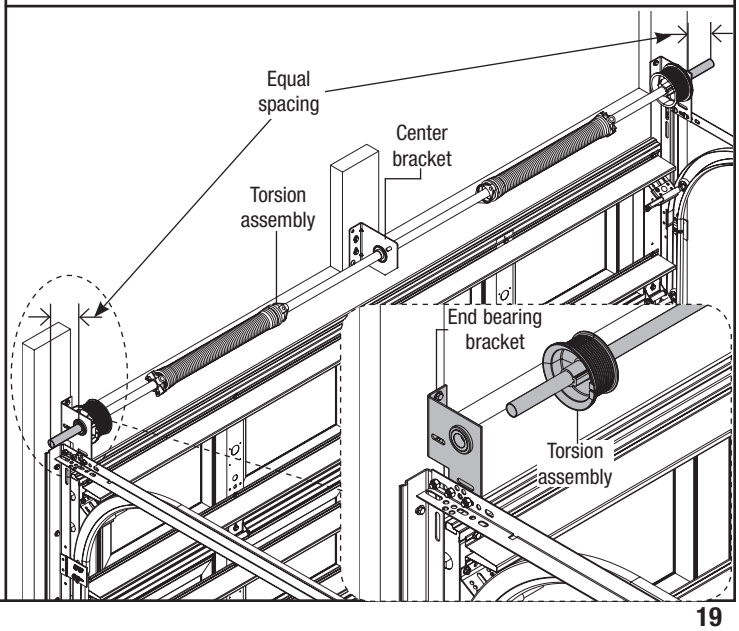
Facing the inside of the door, lay the torsion tube on the floor. Lay the spring with the black color coded winding cone and the black color coded cable drum, at the right hand end of the tube. Lay the spring with the red color coded winding cone and the red color coded cable drum, at the left hand end of the tube.

NOTE: The set screws used on all torsion counterbalance winding cones and cable drums, are now colored red. DO NOT identify right and left hand by the set screw color.

Slide the center bearing bracket onto the torsion tube followed by the springs and cable drums. Center bearing bracket, springs and cable drums must be positioned, as shown. With assistance, pick up the torsion assembly and slide one end of the tube through one end bearing bracket and slide the other end of the tube into the opposite end bearing bracket. Position the torsion tube so that equal amounts of the tube extend from each end bearing bracket.







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18

Center Bearing Bracket

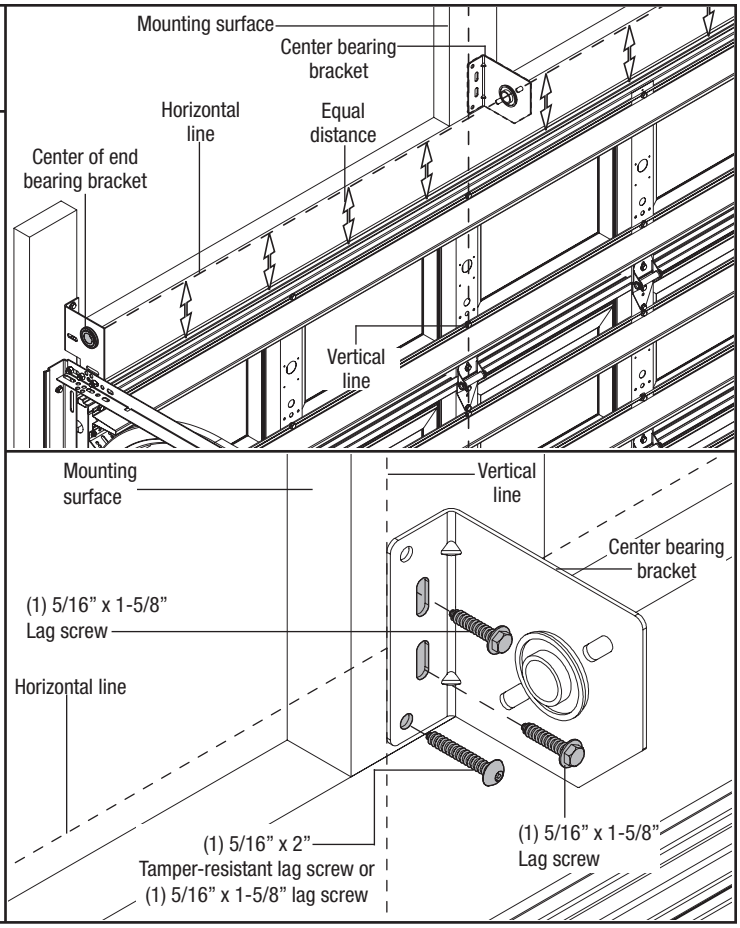
Tools Needed:
Power Drill
7/16" Socket Driver
Level
Tape Measure
Pencil
1/4" Torx Bit
Step Ladder

NOTE: For clarity the torsion counterbalance assembly is not shown.

Measure to locate the center of the door and mark a vertical pencil line on the mounting surface above the door, to indicate the center line of the door. Then, measure from the center of the bearing, in one of the end bearing brackets, DOWN to the top of the door. Using that dimension, measure UP from the top of the door and mark a horizontal pencil line on the mounting surface, intersecting the vertical pencil line. Now align the edge of the center bearing bracket along the vertical pencil line on the mounting surface. Center the bearing bracket on the horizontal line.

This will ensure the torsion tube is level between the center and end bearing brackets. Attach the center bearing bracket, in this location, to the mounting surface, using (2) 5/16" x 1-5/8" lag screws and (1) 5/16" x 2" tamper-resistant lag screw.

IMPORTANT: USE THE 5/16" X 1 5/8" TAMPER-RESISTANT LAG SCREW ONLY IF MOUNTING SURFACE MOUNTED OVER MASONRY. TAMPER-RESISTANT LAG SCREW MUST BE ATTACHED THROUGH THE BOTTOM HOLE OF THE CENTER BEARING BRACKET.



19

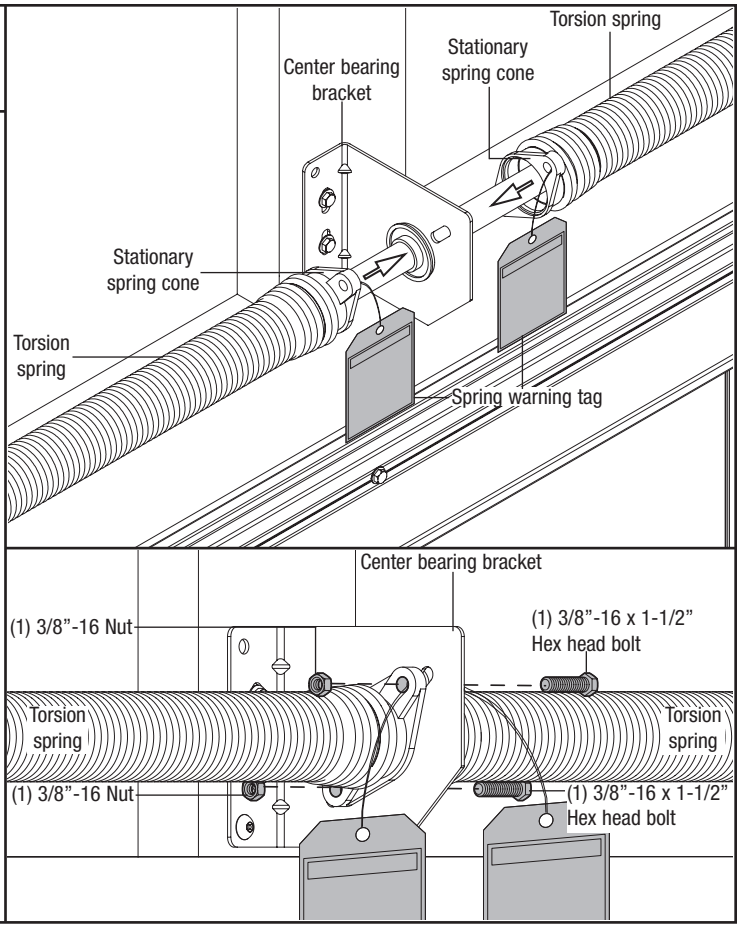
Torsion Spring(s) Installation

Tools Needed:
9/16" Socket
Ratchet Wrench
9/16" Wrench
Step Ladder

Align the stationary spring cone(s) with the holes in the center bearing bracket. Secure the spring(s) to the center bearing bracket with (2) 3/8"-16 x 1-1/2" hex head bolts and 3/8"-16 nuts.

IMPORTANT: SPRINGS UNDER TENSION CAN BE DANGEROUS.

IMPORTANT: THE SPRING WARNING TAG(S) SUPPLIED MUST BE SECURELY ATTACHED TO THE STATIONARY SPRING CONE IN PLAIN VIEW. SHOULD A REPLACEMENT SPRING WARNING TAG BE REQUIRED, CONTACT WAYNE-DALTON FOR FREE REPLACEMENTS.



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20

Counterbalance Cables

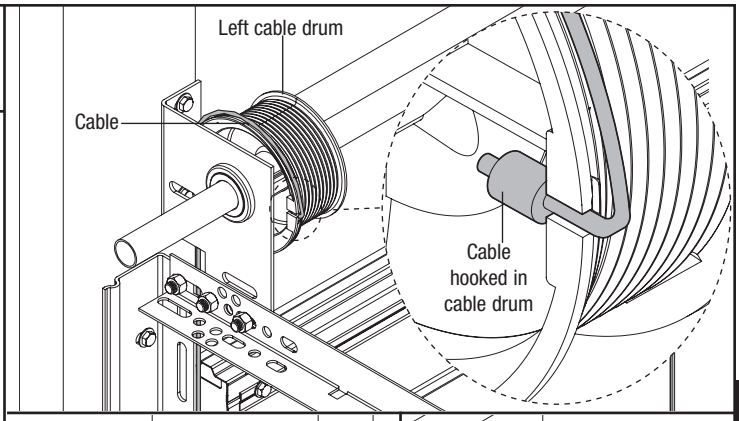
Tools Needed:
Vice Grips
3/8" Wrench
Step Ladder

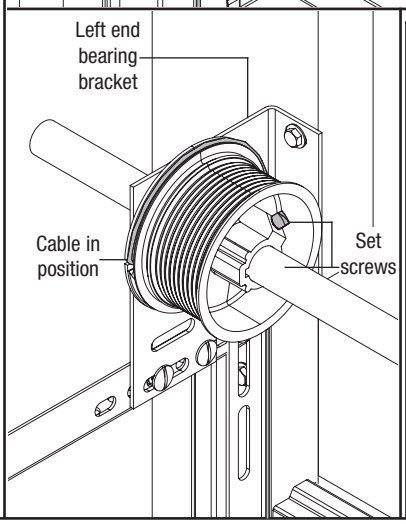
Thread the counterbalance cables around the back side of the left cable drum and verify that there is no cable obstructions. Hook the cables into the drums.

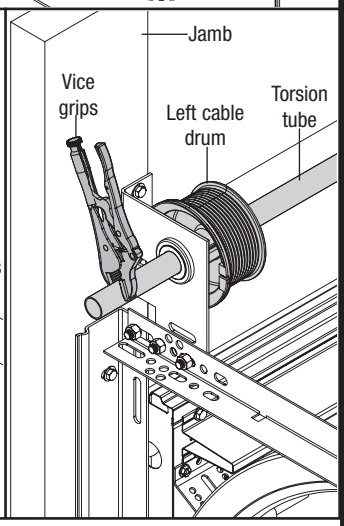
Slide the left hand cable drum against the left hand end bearing bracket and tighten the set screws in the drum to 14-15 ft. lbs. of torque (Once set screws contact the tube, tighten screws one full turn). Rotate the left hand drum and torsion tube until cable is taut. Attach vice grips to torsion tube and brace vice grips against jamb to keep cable taunt.

Slide the right hand cable drum against the right hand end bearing bracket and rotate drum until cable is taunt. Tighten set screws in right hand cable drum.

IMPORTANT: CHECK EACH CABLE, MAKING SURE BOTH ARE SEATED PROPERLY ON THE CABLE DRUMS AND HAVE EQUAL CABLE TENSION.







21

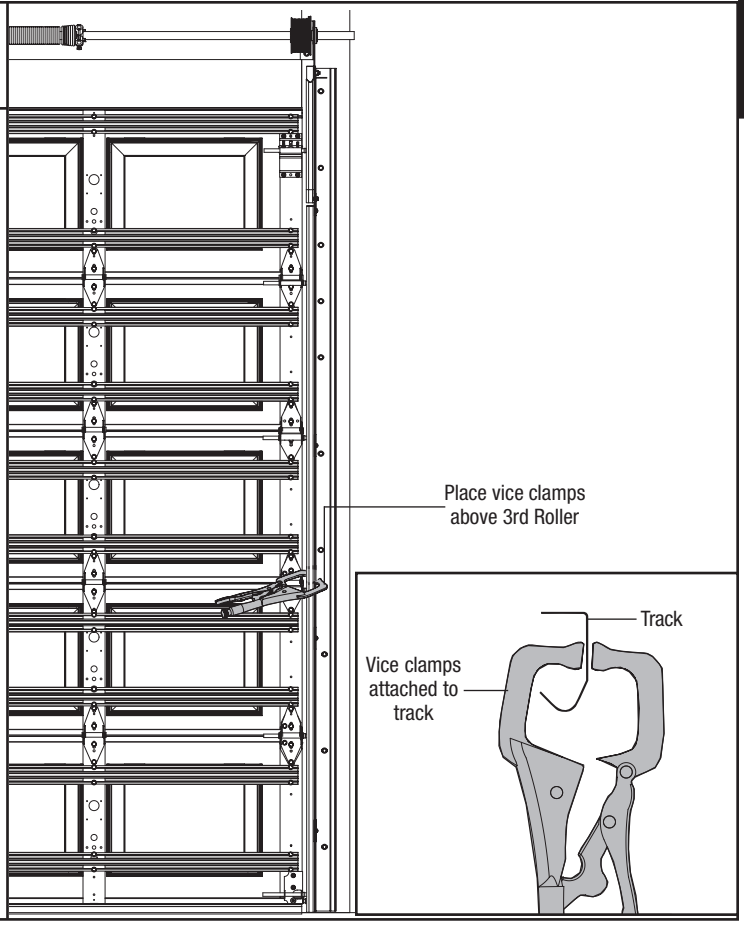
Securing Door for Spring Winding

Tools Needed:
(2) Vice Clamps

Place vice clamps onto both vertical tracks just above the third roller. This is to prevent the garage door from raising while winding counterbalance springs.

⚠ WARNING

FAILURE TO PLACE VICE CLAMPS ONTO VERTICAL TRACK CAN ALLOW DOOR TO RAISE AND CAUSE SEVERE OR FATAL INJURY.



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22

Winding Torsion Spring(s)

Tools Needed:
Approved Winding Bars
Step Ladder
3/8" Wrench

Position a ladder slightly to the side of spring so that the winding cone is easily accessible, yet your body is not in direct line with the winding bars.

Check the label attached to the spring warning tag for the required number of complete turns to balance your door.

8'3" Door Height = Approx. 8-7/8 Turns
8'6" Door Height = Approx. 9-1/8 Turns
8'9" Door Height = Approx. 9-3/8 Turns
9'0" Door Height = Approx. 9-5/8 Turns
9'3" Door Height = Approx. 9-3/4 Turns
9'6" Door Height = Approx. 10 Turns
9'9" Door Height = Approx. 10-1/4 Turns
10'0" Door Height = Approx. 10-1/2 Turns
10'3" Door Height = Approx. 10-3/4 Turns
10'6" Door Height = Approx. 11 Turns
10'9" Door Height = Approx. 11-1/8 Turns
11'0" Door Height = Approx. 11-3/8 Turns
11'3" Door Height = Approx. 11-5/8 Turns
11'6" Door Height = Approx. 11-7/8 Turns
11'9" Door Height = Approx. 12-1/8 Turns
12'0" Door Height = Approx. 12-3/8 Turns
12'3" Door Height = Approx. 9-5/8 Turns
12'6" Door Height = Approx. 9-3/4 Turns
12'9" Door Height = Approx. 10 Turns
13'0" Door Height = Approx. 10-1/8 Turns
13'3" Door Height = Approx. 10-1/4 Turns
13'6" Door Height = Approx. 10-1/2 Turns
13'9" Door Height = Approx. 10-5/8 Turns
14'0" Door Height = Approx. 10-7/8 Turns

⚠ WARNING

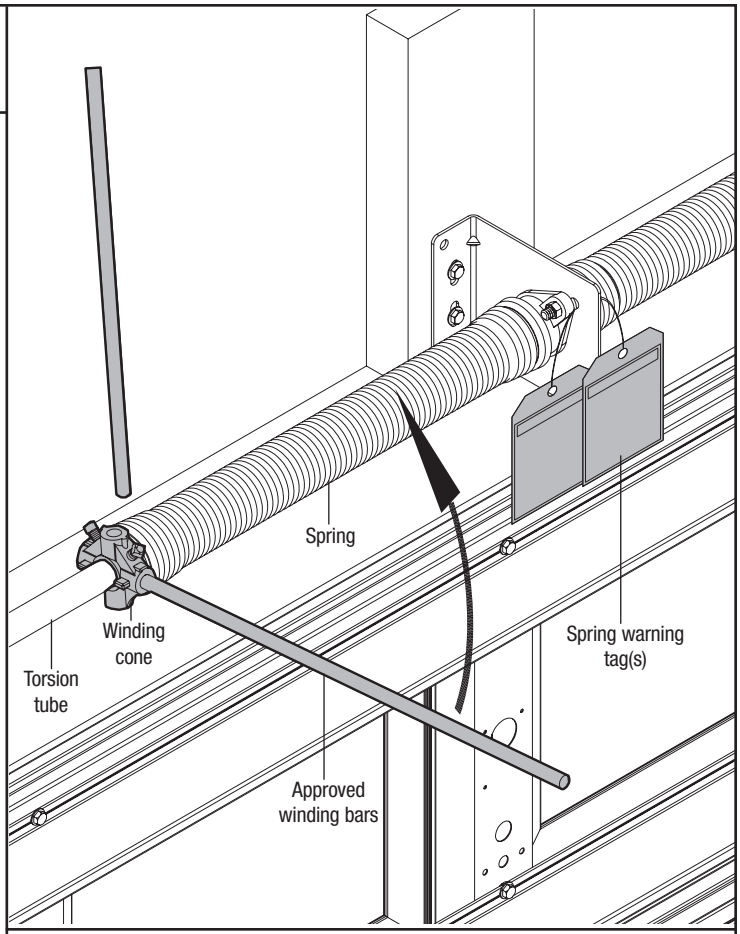
PRIOR TO WINDING OR MAKING ADJUSTMENTS TO THE SPRINGS, ENSURE YOU'RE WINDING IN THE PROPER DIRECTION AS STATED IN THE INSTALLATION INSTRUCTIONS. OTHERWISE, THE SPRING FITTINGS MAY RELEASE FROM SPRING IF NOT WOUND IN THE PROPER DIRECTION AND COULD RESULT IN SEVERE OR FATAL INJURY.

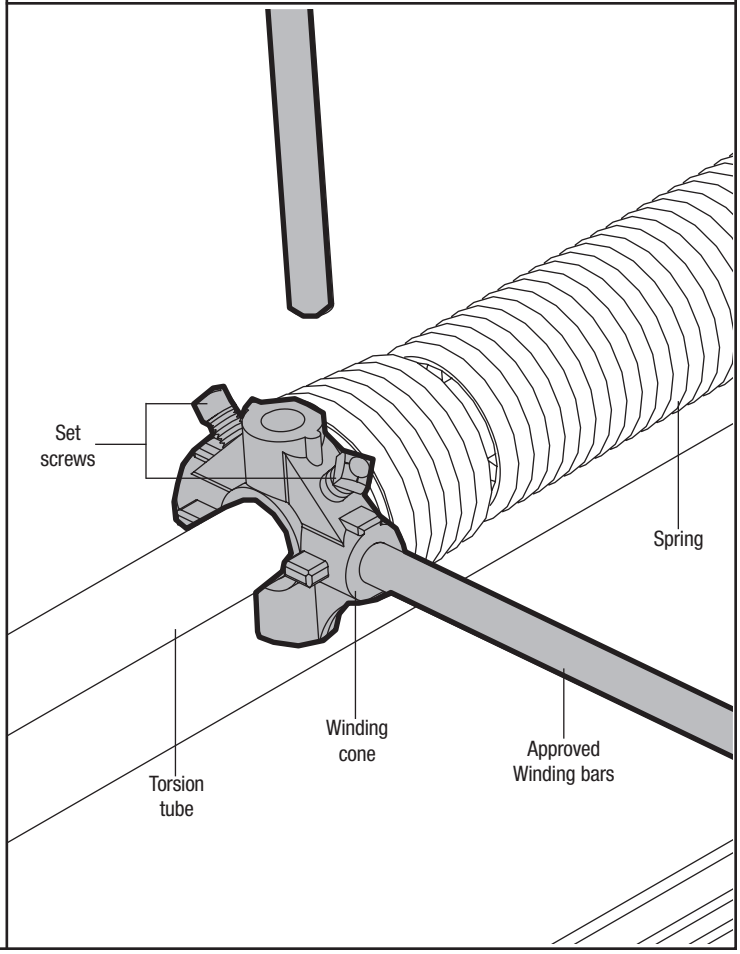
Alternately inserting the winding bars into the holes of the spring's winding cone, rotate the winding cone upward toward ceiling, 1/4 turn at a time, until the required number of complete turns for your door height is achieved. As the last 1/4 turn is achieved, securely hold winding bar while tightening both set screws in winding cone to 14-15 ft. lbs. of torque (Once set screws contact the tube, tighten screws one full turn).

Carefully remove winding bar from winding cone. Repeat for the opposite spring. While holding the door down, to prevent it from rising unexpectedly, in the event the spring(s) were overwound, carefully remove the locking clamps from the torsion tube and the vertical tracks.

IMPORTANT: CAUTIOUSLY REMOVE LOCKING PLIERS FROM THE TORSION TUBE AND LOCKING CLAMPS FROM THE VERTICAL TRACKS.

Adjustments to the required from the number of turns stated may be necessary. If door raises off floor under spring tension alone, Reduce spring tension until door rests on the floor. If the door is hard to raise or drifts down on its own, add spring tension. An unbalanced door such as this can cause garage door opener operation problems.





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23

Rear Support

Tools Needed:

Ratchet Wrench

1/2" Socket

1/2" Wrench

(2) Vice Clamps

Step Ladder

Raise the door until the top section and half of the next section are in a horizontal position. Do not raise door any further since rear of horizontal track is not yet supported.

⚠ WARNING

RAISING DOOR FURTHER HER CAN RESULT IN DOOR FALLING AND CAUSE SEVERE OR FATAL INJURY.

Clamp a pair of vice clamps on the vertical tracks just above the second roller on one side, just below the second roller on the other side. This will prevent the door from raising or lowering while installing the rear support. Using perforated angle, 5/16" x 1-5/8" hex head lag screws and 5/16" bolts with nuts (may not be supplied), fabricate rear support for horizontal tracks. Attach horizontal tracks to the rear supports with 5/16"- 18 x 1-1/4" hex bolts and nuts (may not be supplied). Horizontal tracks must be level and parallel to door within 3/4" maximum of door edge.

⚠ WARNING

KEEP HORIZONTAL TRACK PARALLEL AND WITHIN 3/4" MAXIMUM OF DOOR EDGE, OTHERWISE DOOR COULD FALL, RESULTING IN SEVERE OR FATAL INJURY.

IMPORTANT: DO NOT SUPPORT THE WEIGHT OF THE DOOR ON ANY PART OF THE HORIZONTAL TRACK HANGER THAT CANTILEVERS 4" OR MORE BEYOND A SOUND FRAMING MEMBER.

NOTE: If rear supports are to be installed over drywall, use 5/16" x 2" hex head lag screws, and make sure lag screws engaged solid structural lumber.

NOTE: 26" angle must be attached to sound framing members and nails should not be used.

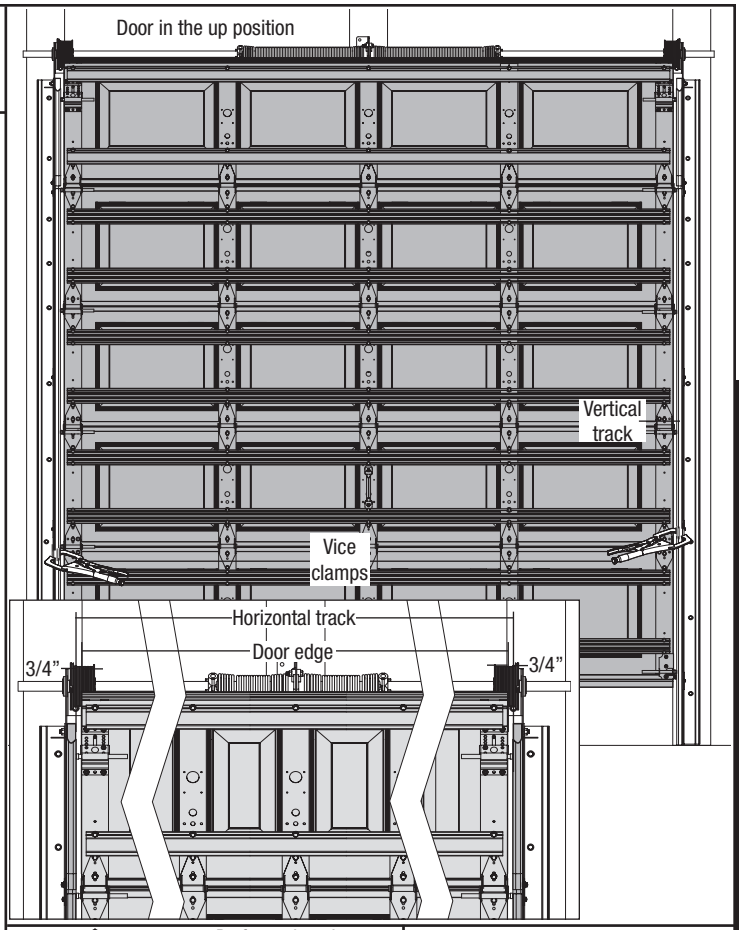
Now, permanently attach the weather seal to both door jambs and header. (Temporarily attached in PREPARING THE OPENING on page 6). Avoid pushing weather seal stop too tightly against face of door. Place the windload label on the intermediate section, as shown.

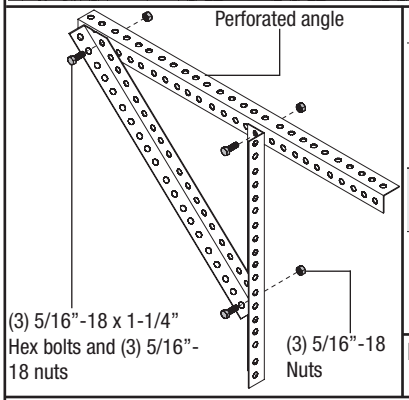
⚠ WARNING

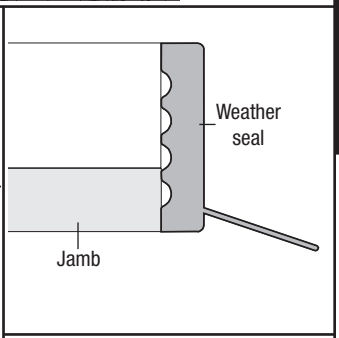
PRIOR TO WINDING OR MAKING ADJUSTMENTS TO THE SPRINGS, ENSURE YOU'RE WINDING IN THE PROPER DIRECTION AS STATED IN THE INSTALLATION INSTRUCTIONS. OTHERWISE, THE SPRING FITTINGS MAY RELEASE FROM SPRING IF NOT WOUND IN THE PROPER DIRECTION AND COULD RESULT IN SEVERE OR FATAL INJURY.

Now, lift door and check its balance. Adjustments to the required number of turns stated may be necessary. If door raises off floor under spring tension alone, reduce spring tension until door rests on the floor. If the door is hard to raise or drifts down on its own, add spring tension. A poorly balanced door can cause garage door opener operation problems.

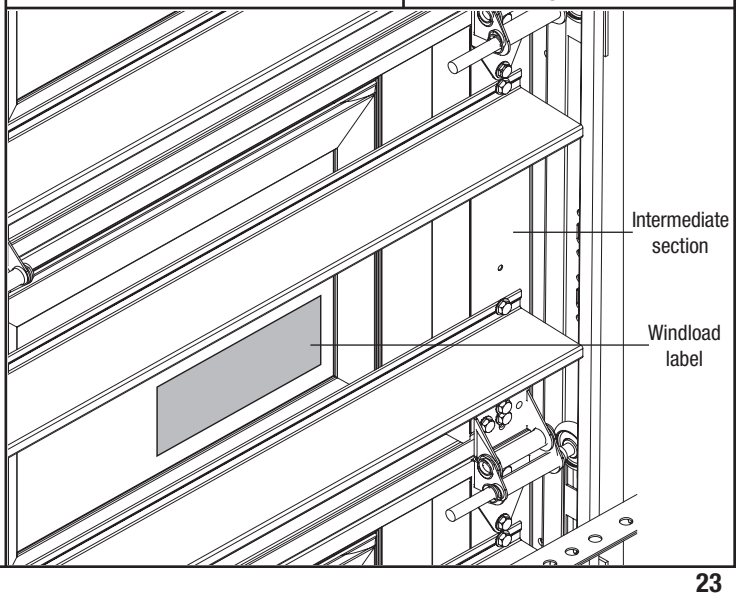
To adjust spring tension, fully close door. Apply vice grips to track above third roller. Insert a winding bar into the winding cone. On single spring doors, cable tension must be maintained by placing vice grips on torsion tube before loosening set screws in the winding cone.







PERMANENTLY ATTACHED WEATHER SEAL



INSTALLATION

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Rear Support Continued...

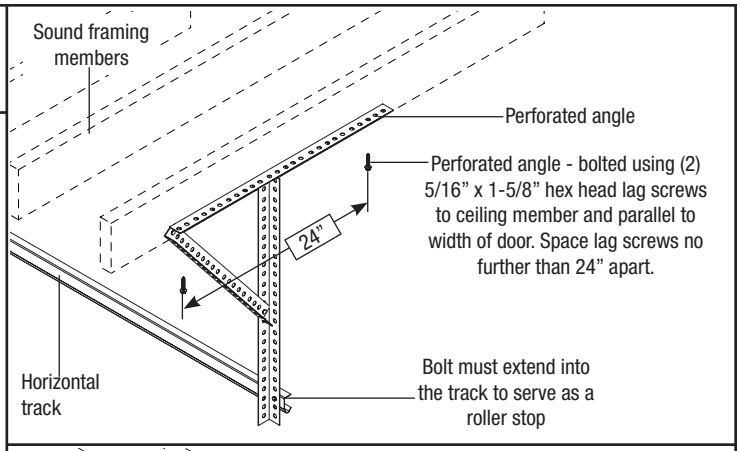
Push upward on the winding bar while carefully loosening the set screws in the winding cone. BE PREPARED TO SUPPORT THE FULL FORCE OF THE TORSION SPRING ONCE THE SET SCREWS ARE LOOSE.

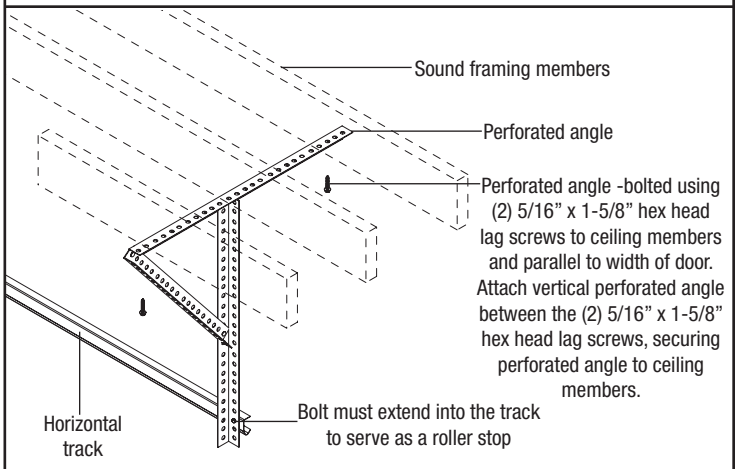
Carefully adjust spring tension 1/4 turn. Retighten both set screws in the winding cone and repeat for the other side. RECHECK DOOR BALANCE DO NOT ADJUST MORE THAN 1/2 TURN FROM THE RECOMMENDED NUMBER OF TURNS.

If door still does not balance correctly, contact a qualified door agency. If the door still does not operate easily, lower the door into the closed position, UNWIND THE SPRING(S) FULLY (Reference the insert "Removing The Old Door/Preparing The Opening" section on torsion spring removal), and recheck the following the items:

1.) Check the door for level.
2.) Check the torsion tube for level.
3.) Check the track spacing.
4.) Check the counterbalance cables for equal tension.
5.) Check the track for potential obstruction of the rollers.
6.) Clamp locking pliers onto track and rewind springs.

IMPORTANT: IF DOOR STILL DOES NOT OPERATE PROPERLY, THEN CONTACT A TRAINED DOOR SYSTEM TECHNICIAN.


Sound framing members
Perforated angle
Perforated angle - bolted using (2) 5/16" x 1-5/8" hex head lag screws to ceiling member and parallel to width of door. Space lag screws no further than 24" apart.
24"
Horizontal track
Bolt must extend into the track to serve as a roller stop


Sound framing members
Perforated angle
Perforated angle -bolted using (2) 5/16" x 1-5/8" hex head lag screws to ceiling members and parallel to width of door. Attach vertical perforated angle between the (2) 5/16" x 1-5/8" hex head lag screws, securing perforated angle to ceiling members.
Horizontal track
Bolt must extend into the track to serve as a roller stop

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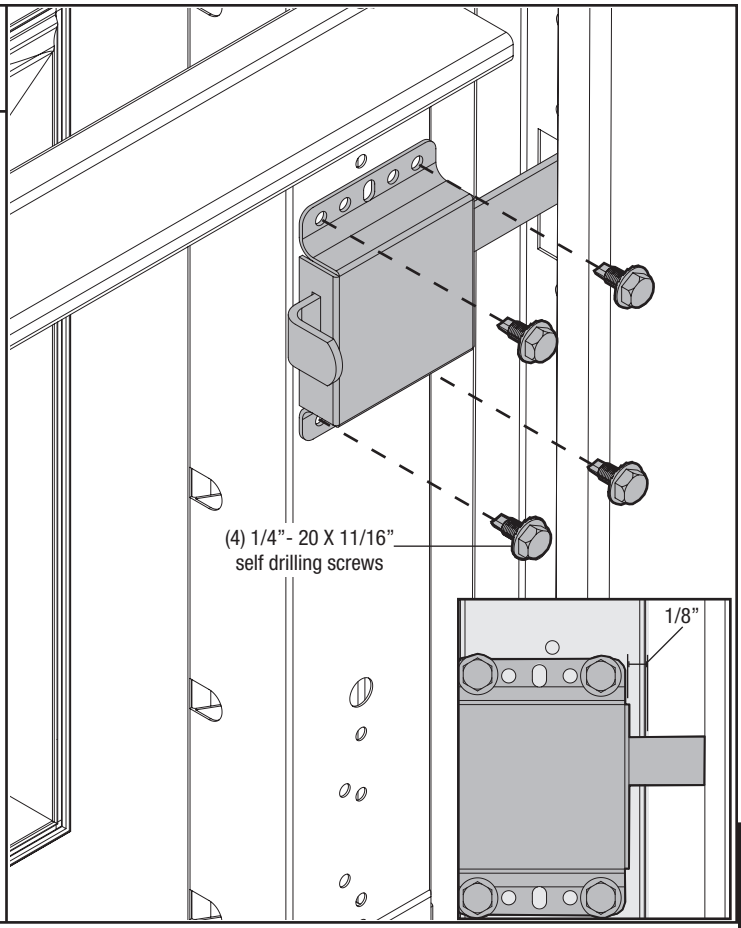
Side Lock

Tools Needed:
Power Drill
7/16” Socket Driver
Tape Measure

Install the side lock on the second section of the door. Square the lock assembly with the door section and align with the square hole in the vertical track. The side lock should be spaced approximately 1/8” in from the section edge. Secure the lock to the section with (4) 1/4”- 20 x 11/16” self drilling screws.

IMPORTANT: SIDE LOCKS MUST BE REMOVED OR MADE INOPERATIVE IN THE UNLOCKED POSITION IF AN OPERATOR IS INSTALLED ON THE DOOR.

NOTE: After completing this step, continue with Step 12 on page 16.



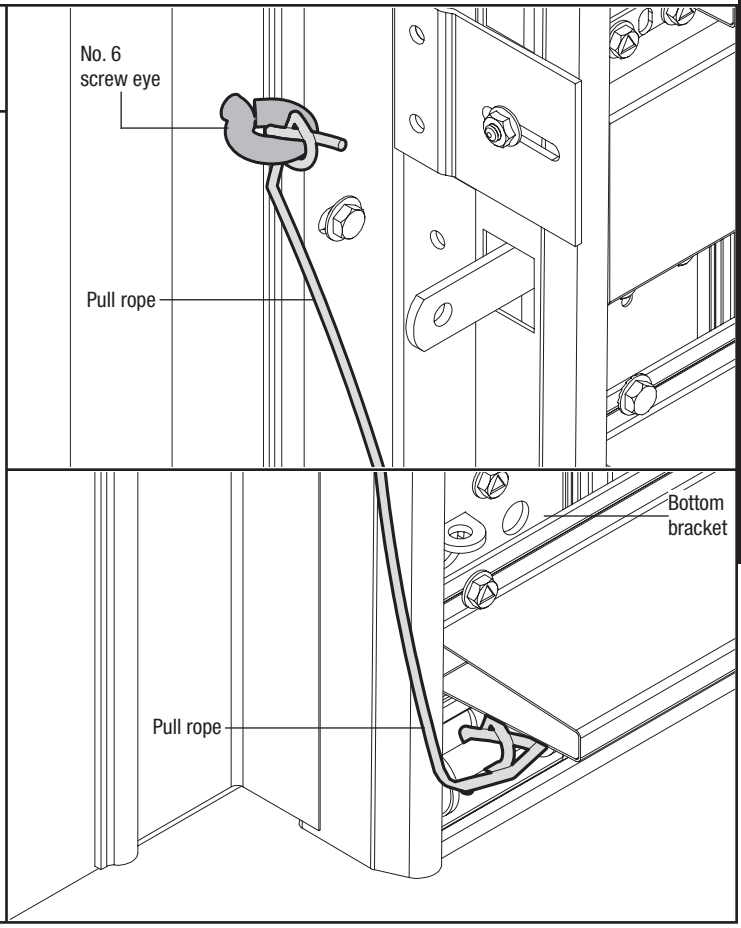
Pull Rope

Tools Needed:
Power Drill
Drill Bit

⚠ WARNING

DO NOT INSTALL PULL ROPES ON DOORS WITH ELECTRIC OPERATORS. CHILDREN MAY BECOME ENTANGLED IN THE ROPE CAUSING SEVERE OR FATAL INJURY.

Pilot drill the location for the No. 6 screw eye. Screw the No. 6 screw eye into the wood jamb approximately 48” to 50” (1220 to 1270 mm) from the floor. Tie the pull rope to the screw eye and to the bottom bracket as shown.



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Cleaning

CLEANING AND PAINTING INSTRUCTIONS FOR DOORS

Cleaning Your Garage Door
IMPORTANT: DO NOT USE A PRESSURE WASHER ON YOUR GARAGE DOOR!

While factory-applied finishes on garage doors are durable, it is desirable to clean them on a routine basis. Some discoloration of the finish may occur when a door has been exposed to dirt-laden atmosphere for a period of time. Slight chalking may also occur as a result of direct exposure to sunlight.

Cleaning the door will generally restore the appearance of the finish. To maintain an aesthetically pleasing finish of the garage door, a periodic washing of the garage door is recommended.

The following cleaning solution is recommended:
A mild detergent solution consisting of one cup detergent (with less than 0.5% phosphate) dissolved into five gallons of warm water will aid in the removal of most dirt.

NOTE: The use of detergents containing greater than 0.5% phosphate is not recommended for use in general cleaning of garage doors.

NOTE: Be sure to clean behind weather stripping on both sides and top of door.

CAUTION: NEVER MIX CLEANSERS OR DETERGENTS WITH BLEACH.

GLASS CLEANING INSTRUCTIONS
Clean with a mild detergent solution (same as above) and a soft cloth. After cleaning, rinse thoroughly.

ACRYLIC CLEANING INSTRUCTIONS
Clean acrylic glazing with nonabrasive soap or detergent and plenty of water. Use your bare hands to feel and dislodge any caked on particles. A soft, grit-free cloth, sponge or chamois may be used to wipe the surface. Do not use hard or rough cloths that will scratch the acrylic glazing. Dry glazing with a clean damp chamois.

NOTE: DO NOT USE any window cleaning fluids, scouring compounds, gritty cloths or solvent-based cleaners of any kind.

Painting

SURFACE PREPARATION FOR PAINTING

Wax on the surface must be removed or paint peeling/flaking will result. To remove this wax, it will be necessary to lightly scuff the surface with a fine steel wool pad, saturated with soapy water. A final wipe and rinse should be done with clean water only, to remove any loose particles and any soapy film residue.

Surface scratches, which have not exposed the metal substrate, can be lightly buffed or sanded with 0000 steel wool or No. 400 sand paper to create a smoother surface. Care must be taken to not expose the substrate under the paint. Once the substrate is exposed, the likelihood for rusting is greatly increased.

If substrate is exposed, it must be treated to prevent rust from forming. Sand the exposed area lightly and paint with a high quality metal primer, specifically intended for galvanized surfaces, to protect the area from corrosion. Allow for drying time on primer can label before applying topcoat.
The surface of the factory-applied finish, that is being painted, must not be too smooth, or the paint will not adhere to it. It is advisable to test in an inconspicuous area, to evaluate adhesion. If poor adhesion is observed, surface preparation for painting the factory-applied finish must be repeated until desired results are achieved. Again, care must be taken to not expose the substrate under the paint.

Painting
After surface has been properly prepared, it must be allowed to dry thoroughly, and then coated immediately with premium quality latex house paint. Follow paint label directions explicitly. Oil base or solvent base paints are not recommended. Please note that if substrate is exposed and not properly primed, painting with latex paint may cause accelerated rusting of the steel in the exposed area.

NOTES:
1. Repainting of finish painted steel doors cannot be warranted, as this condition is totally beyond the door manufacturer's control.
2. Consult a professional coatings contractor if in doubt about any of the above directions.
3. Follow directions explicitly on the paint container labels for proper applications of coatings and disposal of containers. Pay particular attention to acceptable weather and temperature conditions in which to paint.

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Limited Warranty
MODEL 8000, 8100 and 8200

Subject to the terms and conditions contained in this Limited Warranty, Wayne-Dalton ("Manufacturer") warrants the sections of the door, which is described at the top of this page, for a period of **TEN (10) YEARS** from the date of installation against:

(i) The door becoming inoperable due to rust-through of the steel skin from the core of the door section, due to cracking, splitting, or other deterioration of the steel skin, or due to structural failure caused by separation or degradation of the foam insulation.

(ii) Peeling of the original paint on the door as a result of a defect in the original paint or in the application of the original paint coating, in cases where the door sections and the original paint: (a) have not been subjected to adverse atmospheric conditions or contaminates (such as salt water or other marine environment, or to toxic or abrasive substances, including those in the air); (b) have been maintained in compliance with Manufacturer's recommendations; and (c) have not been subject to physical abrasion, impacted by a hard object, or punctured (including without limitation "paint rub" occurring in metal to metal contact and movement).

The Manufacturer warrants the garage door hardware (except springs) and the tracks of the above-described door, for a period of **TEN (10) YEARS** from the date of installation, against defects in material and workmanship, subject to all the terms and conditions below.

The Manufacturer warrants those component parts of the door not covered by the preceding provisions of this Limited Warranty against defects in material and workmanship for a period of **ONE (1) YEAR** from the date of installation.

This Limited Warranty is extended only to the person who purchased the product and continues to own the premises (where the door is installed) as his/her primary residence ("Buyer"). This Limited Warranty does not apply to residences other than primary, or to commercial or industrial installations, or to installations on rental property (even when used by a tenant as a residence). This Limited Warranty is not transferable to any other person (even when the premises is sold), nor does it extend benefits to any other person. As a result this Limited Warranty does NOT apply to any person who purchases the product from someone other than an authorized Wayne-Dalton dealer or distributor.

The Manufacturer will not be responsible for any damage attributable to improper storage, improper installation, or any alteration of the door or its components, abuse, damage from corrosive fumes or substances, salt spray or saltwater air, fire, Acts of God, failure to properly maintain the door, or attempt to use the door, its components or related products for other than its intended purpose and its customary usage. This Limited Warranty does not cover ordinary wear. This Limited Warranty will be voided if the original finish is painted over, unless Manufacturer's preparation and painting instructions are followed explicitly. This Limited Warranty will be voided if any holes are drilled into the door, other than those specified by the Manufacturer.

THIS LIMITED WARRANTY COVERS A CONSUMER PRODUCT AS DEFINED BY THE MAGNUSON-MOSS ACT. NO WARRANTIES, EXPRESS OR IMPLIED (INCLUDING BUT NOT LIMITED TO THE WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE) WILL EXTEND BEYOND THE TIME PERIOD SET FORTH IN **UNDERSCORED BOLD FACE TYPE** IN THIS LIMITED WARRANTY, ABOVE.

- Some States do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

Any claim under this Limited Warranty must be made in writing, within the applicable warranty period, to the dealer from which the product was purchased. Unless the dealer is no longer in business, a written claim to the Manufacturer will be the same as if no claim had been made at all.

At the Manufacturer's option, pursuant to the dealer having notified the Manufacturer of a warranty claim, a service representative may inspect the product on site, or Buyer may be required to return the product to the Manufacturer at Buyer's expense. Buyer agrees to cooperate with any representative of the Manufacturer and to give such representative full access to the product with the claimed defect and full access to the location of its installation.

If the Manufacturer determines that the claim is valid under the terms of this Limited Warranty, the Manufacturer will cause the defective product to be repaired or replaced. The decision about the manner in which the defect will be remedied will be at the discretion of the Manufacturer, subject to applicable law. THE REMEDY WILL COVER ONLY MATERIAL. THIS LIMITED WARRANTY DOES NOT COVER OTHER CHARGES, SUCH AS FIELD SERVICE LABOR FOR REMOVAL, INSTALLATION, PAINTING, SHIPPING, ETC.

Any repairs or replacements arranged by Manufacturer will be covered by (and subject to) the terms, conditions, limitations and exceptions of this Limited Warranty; provided, however, that the installation date for the repaired or replaced product will be deemed to be the date the original product was installed, and this Limited Warranty will expire at the same time as if there had been no defect. If a claim under this Limited Warranty is resolved in a manner other than described in the immediately preceding paragraph, then neither this Limited Warranty nor any other warranty from the Manufacturer will cover the repaired or replaced portion of the product.

THE REMEDIES FOR THE BUYER DESCRIBED IN THIS LIMITED WARRANTY ARE EXCLUSIVE and take the place of any other remedy. The liability of the Manufacturer, whether in contract or tort, under warranty, product liability, or otherwise, will not go beyond the Manufacturer's obligation to repair or replace, at its option, as described above. THE MANUFACTURER WILL NOT UNDER ANY CIRCUMSTANCES BE LIABLE FOR SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, including (but not limited to) damage or loss of other property or equipment, personal injury, loss of profits or revenues, business or service interruptions, cost of capital , cost of purchase or replacement of other goods, or claims of third parties for any of the foregoing.

- Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

No employee, distributor, dealer, representative, or other person has the authority to modify any term or condition contained in this Limited Warranty or to grant any other warranty on behalf of or binding on the Manufacturer, and anyone's attempt to do so will be null and void.

Buyer should be prepared to verify the date of installation to the satisfaction of the Manufacturer.

The rights and obligations of the Manufacturer and Buyer under this Limited Warranty will be governed by the laws of the State of Ohio, USA, to the extent permitted by law.

- This Limited Warranty gives you specific legal rights and you may also have other rights, which may vary from State to State.

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Covered by one or more of the following Patents; 5,408,724; 5,409,051; 5,419,010; 5,495,640; 5,522,446; 5,562,141; 5,566,740; 5,568,672; 5,718,533; 6,019,269; 6,089,304; 6,644,378; 6,374,567; 6,561,256; 6,527,037; 6,640,872; 6,672,362; 6,725,898; 6,843,300; 6,915,573; 6,951,237; 7,014,386; 7,036,548; 7,059,380; 7,121,317; 7,128,123; 7,134,471; 7,134,472; 7,219,392; 7,254,868. Canadian: 2,384,936; 2,477,445; 2,495,175; 2,507,590; 2,530,701; 2,530,74; 2, 2,532,824. Other US and Foreign Patents pending

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Thank you for your purchase